This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

+ *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.

+ *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.

+ *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.

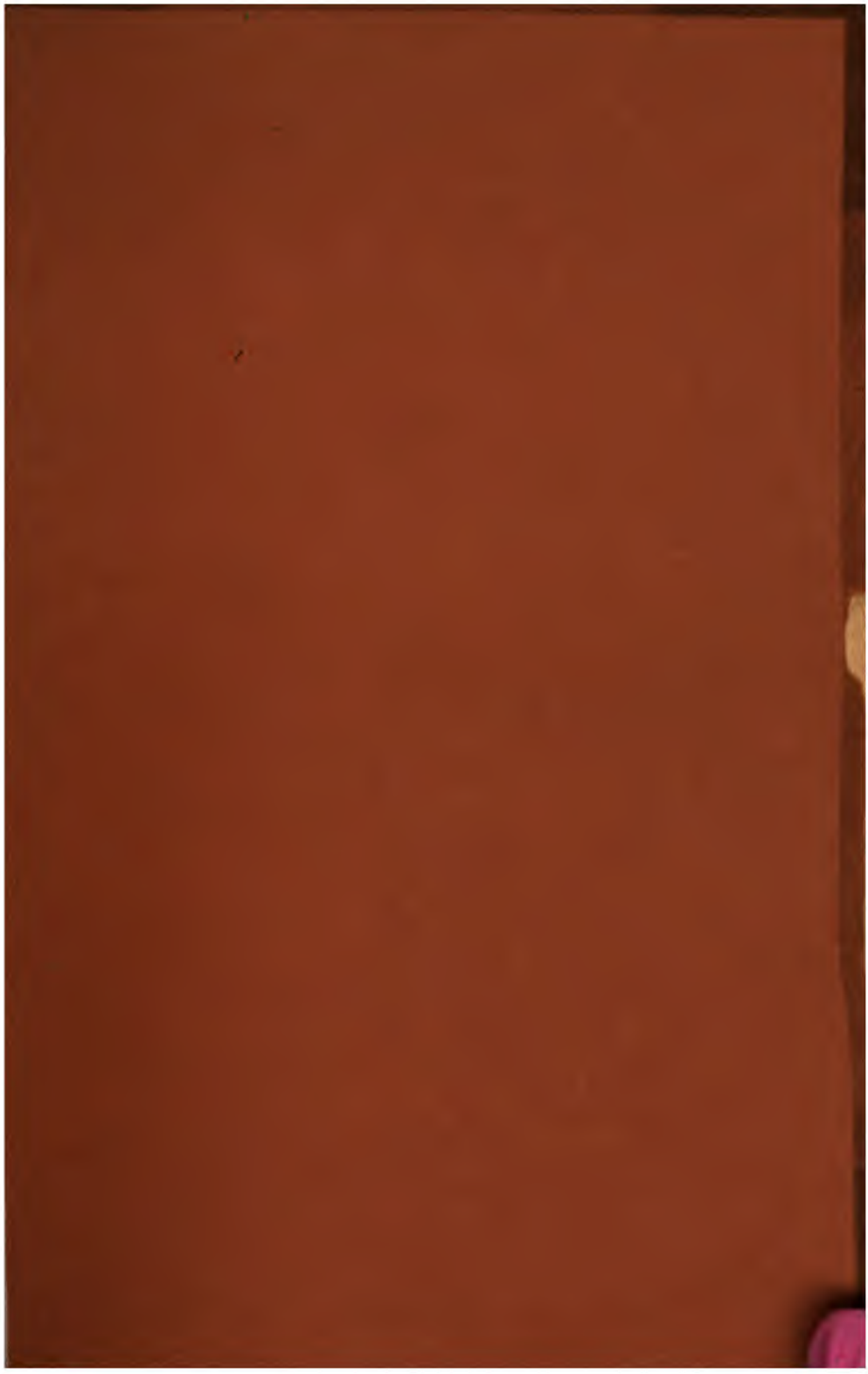
+ *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at `http://books.google.com/`

UC-NRLF
B 3 736 157

REESE LIBRARY
OF THE
UNIVERSITY OF CALIFORNIA.
Received May 1884
Accessions No. 24719 Shelf No.



INDEX

TO

REPORTS AND TRANSACTIONS

OF THE

BRITISH ASSOCIATION

FOR THE

ADVANCEMENT OF SCIENCE,

FROM 1831 TO 1860 INCLUSIVE.

REESE LIBRARY
OF THE
UNIVERSITY
OF
CALIFORNIA

LONDON:
JOHN MURRAY, ALBEMARLE STREET.
1864.

24719

PRINTED BY TAYLOR AND FRANCIS,
RED LION COURT, FLEET STREET.

NOTICE.

THE INDEX, now completed, to the Reports and Transactions of the British Association for the Advancement of Science from the beginning of its labours in 1831 to 1860, was projected by Professor Phillips while holding the office of Assistant General Secretary. He had hoped, by the cooperation of his friend Mr. Griffith, and the aid of Mr. William Askham, who had been engaged in many ways as an able and zealous assistant at the annual meetings and in the printing of the volumes, to have been able to see this work finished before retiring from office. By the regretted death of Mr. Askham an unexpected delay occurred, and a larger share of personal labour has fallen on the present Assistant General Secretary.

The Proceedings of the Association, except those of the first Meeting, are printed in two portions; the first consisting of Reports and Researches in Science, which have been drawn up by request of the General Committee, and a larger number of Communications offered to the several Sections composing each Meeting. For each of these portions an Index has been prepared and printed in the Annual Volumes.

The present work is not merely a collection of these separate elements into one Catalogue; it was intended to bear the character of a revised and arranged Table of Reference, assigning to each Author his share of the work, to each Place the descriptive passages, and to each Subject the principal notices relating to it. It was thought desirable to continue the plan of separate reference to 'Reports' and 'Sectional Proceedings,' and to construct for each of these parts, separate registers of 'Authors,' 'Places,' and 'Subjects.' In cases where Reports were drawn up by Committees appointed by the Association, all the Members of the Committee have usually been quoted as Authors, though in some instances only one signature is annexed, and in others, as in the Report on Zoological Nomenclature, the principal features of plan and execution were impressed by one mind firmly directed to every part of the subject.

+ 89

INDEX

TO

REPORTS AND TRANSACTIONS,

FROM 1831 TO 1860 INCLUSIVE.

Preliminary Index.

Origin of the Association, 1831–32, 17.

Exposition of the Objects and Plan of the Association, 1831–32, 21.

Designation, "The British Association for the Advancement of Science," 1831–32, 41.

Arrangements for the First Meeting, 1831–32, 18.

Objects and Rules of the Association:—
1831–32, 615; 1833, 497; 1834, xi; 1835, v; 1836, v; 1838, v; 1839, v; 1841, v; 1845, v; 1848, v; 1849, v; 1850, v; 1852, xi.

Prefaces to the First Volume of Reports, 1831–32, vii, 9.

Preface to the Third Report, 1833, iii.

Places and times of Meeting, with names of the Officers, from the commencement:—
1838, ix; 1839, ix; 1840, ix; 1841, viii; 1842, viii; 1843, viii; 1844, viii; 1845, ix; 1846, viii; 1847, viii; 1848, viii; 1849, viii; 1850, viii; 1851, xiv; 1852, xvi; 1853, xvi; 1854, xviii; 1855, xx; 1856, xx; 1857, xx; 1858, xx; 1859, xx; 1860, xx.

Officers and Council of the Association:—
for 1831–32, 1831–32, 45.
1832–33, 1831–32, 111.
1833–34, 1833, xxvii.
1834–35, 1834, xxviii.
1835–36, 1835, viii.
1836–37, 1836, viii.
1837–38, 1837, viii.
1838–39, 1838, viii.
1839–40, 1839, viii.
1840–41, 1840, viii.
1841–42, 1841, vii.
1842–43, 1842, vii.

Officers and Council of the Association (continued):—
for 1843–44, 1843, vii.
1844–45, 1844, vii.
1845–46, 1845, viii.
1846–47, 1846, xiv.
1847–48, 1847, xiv.
1848–49, 1848, xiv.
1849–50, 1849, xiv.
1850–51, 1850, xiv.
1851–52, 1851, xx.
1852–53, 1852, xxii.
1853–54, 1853, xxii.
1854–55, 1854, xxiv.
1855–56, 1855, xxvi.
1856–57, 1856, xxvi.
1857–58, 1857, xxvi.
1858–59, 1858, xxvi.
1859–60, 1859, xxvi.
1860–61, 1860, xxviii.

Members of Council from the commencement.
1838, x; 1839, x; 1840, x; 1841, ix; 1842, ix; 1843, ix; 1844, ix; 1845, x; 1846, x; 1847, x; 1848, x; 1849, x; 1850, x; 1851, xvi; 1852, xviii; 1853, xviii; 1854, xxi; 1855, xxiii; 1856, xxiv; 1857, xxiv; 1858, xxiii; 1859, xxiii; 1860, xxv.

Proceedings at the following General Meetings:—
1st *Meeting* (York), 1831–32, 15.
2nd *Meeting* (Oxford), 1831–32, 95.
3rd *Meeting* (Cambridge), 1833, ix.
4th *Meeting* (Edinburgh), 1834, ix.

General Committee, Proceedings and Resolutions of the:—
1831–32, 45, 111; 1833, xxxv; 1834, xxvi; 1835, xv; 1836, xvi; 1837, xvii; 1838, xx–xxvi; 1839, xxi, xxiv; 1840

General Committee, Proceedings and Resolutions of the (continued):—
xxiii, xxiv; 1841, xix; 1842, xix, xx–xxix; 1843, xx; 1844, xxi, xxx; 1845, xv; 1846, xix; 1847, xix; 1848, xxii; 1849, xix: 1850, xxi; 1851, xxix; 1852, xxxii; 1853, xxxiii; 1854, xlvi; 1855, lxiii; 1856, xxxix; 1857, xxxix; 1858, xxxix; 1859, xlix; 1860, xlv.

Officers of Sectional Committees:—
1*st Meeting* (York), 1831–32, 46.
2*nd Meeting* (Oxford), 1831–32, 112.
3*rd Meeting* (Cambridge), 1833, xxxix.
4*th Meeting* (Edinburgh), 1834, xxviii.
5*th Meeting* (Dublin), 1835, ix.
6*th Meeting* (Bristol), 1836, ix.
7*th Meeting* (Liverpool), 1837, ix.
8*th Meeting* (Newcastle), 1838, xii.
9*th Meeting* (Birmingham), 1839, xii.
10*th Meeting* (Glasgow), 1840, xii.
11*th Meeting* (Plymouth), 1841, xi.
12*th Meeting* (Manchester), 1842, xi.
13*th Meeting* (Cork), 1843, xi.
14*th Meeting* (York), 1844, xi.
15*th Meeting* (Cambridge), 1845, xiv.
16*th Meeting* (Southampton), 1846, xv.
17*th Meeting* (Oxford), 1847, xv.
18*th Meeting* (Swansea), 1848, xv.
19*th Meeting* (Birmingham), 1849, xv.
20*th Meeting* (Edinburgh), 1850, xv.
21*st Meeting* (Ipswich), 1851, xxi.
22*nd Meeting* (Belfast), 1852, xxiii.
23*rd Meeting* (Hull), 1853, xxiii.
24*th Meeting* (Liverpool), 1854, xxv.
25*th Meeting* (Glasgow), 1855, xxvii.
26*th Meeting* (Cheltenham), 1856, xxvii.
27*th Meeting* (Dublin), 1857, xxvii.
28*th Meeting* (Leeds), 1858, xxvi.
29*th Meeting* (Aberdeen), 1859, xxvii.
30*th Meeting* (Oxford), 1860, xxix.

Recommendations, Desiderata, &c.:—
1*st Meeting* (York), 1831–32, 48.
2*nd Meeting* (Oxford), 1831–32, 115.
3*rd Meeting* (Cambridge), 1833, xxxvi, 467.
4*th Meeting* (Edinburgh), 1834, xxx, xxxii.
5*th Meeting* (Dublin), 1835, xv.
6*th Meeting* (Bristol), 1836, xvi.
7*th Meeting* (Liverpool), 1837, xvii.
8*th Meeting* (Newcastle), 1838, xx.
9*th Meeting* (Birmingham), 1839, xxii.
10*th Meeting* (Glasgow), 1840, xxiii.
11*th Meeting* (Plymouth), 1841, xix.
12*th Meeting* (Manchester), 1842, xix, xx.
13*th Meeting* (Cork), 1843, xx.
14*th Meeting* (York), 1844, xxi.
15*th Meeting* (Cambridge), 1845, xv.
16*th Meeting* (Southampton), 1846, xix.
17*th Meeting* (Oxford), 1847, xix.
18*th Meeting* (Swansea), 1848, xxii.
19*th Meeting* (Birmingham), 1849, xix.
20*th Meeting* (Edinburgh), 1850, xxi.

Recommendations, Desiderata, &c. (continued):—
21*st Meeting* (Ipswich), 1851, xxix.
22*nd Meeting* (Belfast), 1852, xxxii.
23*rd Meeting* (Hull), 1853, xxxiii.
24*th Meeting* (Liverpool), 1854, xlvi.
25*th Meeting* (Glasgow), 1855, lxiii.
26*th Meeting* (Cheltenham), 1856, xxxix.
27*th Meeting* (Dublin), 1857, xxxix.
28*th Meeting* (Leeds), 1858, xxxix.
29*th Meeting* (Aberdeen), 1859, xlix.
30*th Meeting* (Oxford), 1860, xlv.

Treasurer's Accounts:—
1831–32, 124; 1833, viii; 1834, xiv; 1835, xi; 1836, xi; 1837, xi; 1838, xiv; 1839, xiv; 1840, xiv; 1841, xii; 1842, xii; 1843, xii; 1844, xii; 1845, xii; 1846, xii; 1847, xii; 1848, xii; 1849, xii; 1850, xii; 1851, xviii; 1852, xx; 1853, xx; 1854, xxiii; 1855, xxv; 1856, xxiii; 1857, xxiii; 1858, xxiii; 1859, xxiii; 1860, xxiv.

Reports of the Council to the General Committee:—
at Cork, 1843, xxxiv.
York, 1844, xlvi.
Southampton, 1846, xvi.
Oxford, 1847, xvi.
Swansea, 1848, xvi.
Birmingham, 1849, xvi.
Edinburgh, 1850, xvi.
Ipswich, 1851, xxiii.
Belfast, 1852, xxiv.
Hull, 1853, xxiv.
Liverpool, 1854, xxvi.
Glasgow, 1855, xxviii.
Cheltenham, 1856, xxviii.
Dublin, 1857, xxviii.
Leeds, 1858, xxviii.
Aberdeen, 1859, xxviii.
Oxford, 1860, xxx.

Reports of the Kew Observatory Committee:—
1843, xxxix; 1848, xvii; 1850, xx; 1853, xxix; 1854, xxvii; 1855, xxx, xxxvi, xxxvii; 1856, xxx; 1857, xxxi; 1858, xxxiii; 1859, xl; 1860, xxxi.
(See also *Reports of the Council* and F. Ronalds.)

Reports of the Parliamentary Committee:—
at Belfast, 1852, xxix.
Hull, 1853, xxxi.
Liverpool, 1854, xlii.
Glasgow, 1855, xlvii, xlviii.
Cheltenham, 1856, xxxviii.
Dublin, 1857, xxxviii.
Leeds, 1858, xxxvi.
Aberdeen, 1859, xlvii.
Oxford, 1860, xliv.

Synopsis of Sums appropriated to Scientific Objects:—
4*th Meeting* (Edinburgh), 1834, xl.

Synopsis of Sums appropriated to Scientific Objects (continued):—
5*th Meeting* (Dublin), 1835, xl.
6*th Meeting* (Bristol), 1836, xx.
7*th Meeting* (Liverpool), 1837, xxiii.
8*th Meeting* (Newcastle), 1838, xxvii.
9*th Meeting* (Birmingham), 1839, xxiv.
10*th Meeting* (Glasgow), 1840, xxxii.
11*th Meeting* (Plymouth), 1841, xxv.
12*th Meeting* (Manchester), 1842, xxv.
13*th Meeting* (Cork), 1843, xxiv.
14*th Meeting* (York), 1844, xxv.
15*th Meeting* (Cambridge), 1845, xx.
16*th Meeting* (Southampton), 1846, xxi.
17*th Meeting* (Oxford), 1847, xxi.
18*th Meeting* (Swansea), 1848, xxiv.
19*th Meeting* (Birmingham), 1849, xxi.
20*th Meeting* (Edinburgh), 1850, xxiv.
21*st Meeting* (Ipswich), 1851, xxxii.
22*nd Meeting* (Belfast), 1852, xxxv.
23*rd Meeting* (Hull), 1853, xxxv.
24*th Meeting* (Liverpool), 1854, xlix.
25*th Meeting* (Glasgow), 1855, lxvii.
26*th Meeting* (Cheltenham), 1856, xlii.
27*th Meeting* (Dublin), 1857, xli.
28*th Meeting* (Leeds), 1858, xliii.
29*th Meeting* (Aberdeen), 1859, lii.
30*th Meeting* (Oxford), 1860, xlviii.

General Statement of Sums paid for Scientific purposes:—
1843, xxv; 1844, xxvi; 1845, xxi; 1846, xxii; 1847, xxii; 1848, xxv; 1849, xxii; 1850, xxv; 1851, xxxiii; 1852, xxxvi; 1853, xxxvi; 1854, l; 1855, lxviii; 1856, xliii; 1857, xlii; 1858, xliv; 1859, liii; 1860, l.

Reports, Researches, and Desiderata, drawn up at the request of the Association, and printed in its Transactions:—
1835, xiii; 1836, xii; 1837, xii; 1838, xv; 1839, xvi; 1840, xvi; 1841, xiv; 1842, xiv; 1843, xiv; 1844, xiv.
(The Contents of the Reports are given at the end of each Volume, commencing with the year 1836.)

Corresponding Members:—
1834, xxvii; 1835, x; 1836, x; 1837, x; 1838, xiii; 1839, xiii; 1840, xiii; 1841, xi; 1842, xi; 1843, xi; 1844, xi; 1845, xv; 1846, xvi; 1847, xvi; 1848, xvi; 1849, xvi; 1850, xvi; 1851, xxii; 1852, xxiv; 1853, xxiv; 1854, xxvi; 1855, xxviii; 1856, xxviii; 1857, xxviii; 1858, xxviii; 1859, xxviii; 1860, xxx.

General Meetings:—
1831–32, 15, 95; 1833, ix; 1834, ix, xxiii; 1837, xliii; 1838, xxx; 1839, xxviii; 1840, xxxiv; 1841, xxv; 1842, xxix; 1843, xxviii; 1844, xxx; 1845, xxv; 1846, xxvi; 1847, xxvi; 1848, xxix; 1849, xxvii; 1850, xxx; 1851, xxxviii; 1852, xl; 1853, xl; 1854, liv; 1855, lxxii; 1856, xlvii; 1857, xlvi; 1858, xlviii; 1859, lvii; 1860, liv.

Exhibitions:—
York Meeting, 1831–32, 91.
Cambridge Meeting, 1833.
The First Exhibition of the Association of Philosophical Instruments, Models of Inventions, Products of National Industry (with Catalogue), 1838, 189.
Reasons for thinking that the Annual Meetings of the Association ought not to be restricted to places which present formal invitations, 1848, xxi.

Addresses:—
1*st Meeting* (York), by Viscount Milton [the late Earl Fitzwilliam], 1831–32, 15.
2*nd Meeting* (Oxford), by the Rev. Dr. Buckland, 1831–32, 96.
3*rd Meeting* (Cambridge), by the Rev. Prof. Sedgwick, 1833, x, xxvii, and the Rev. W. Whewell, xi.
4*th Meeting* (Edinburgh), by the Rev. Prof. Sedgwick, Sir Thomas M. Brisbane, and Professor J. D. Forbes, 1834, ix, xi.
5*th Meeting* (Dublin), by Professor Sir William R. Hamilton, 1835, xli.
6*th Meeting* (Bristol), by Professor Daubeny, 1836, xxi.
7*th Meeting* (Liverpool), by Professor Traill, M.D., 1837, xxv.
8*th Meeting* (Newcastle), by Mr. Murchison (Sir R. I. Murchison), 1838, xxxi.
9*th Meeting* (Birmingham), by the Rev. W. Vernon Harcourt, 1839, xxix.
10*th Meeting* (Glasgow), by Roderick I. Murchison, F.R.S., and Major Edward Sabine, V.P.R.S, 1840, xxxv.
11*th Meeting* (Plymouth), by the Rev. Professor Whewell, 1841, xxvii.
12*th Meeting* (Manchester), by the Lord Francis Egerton [the late Earl of Ellesmere], 1842, xxxi.
13*th Meeting* (Cork), by the Earl of Rosse, 1843, xxix.
14*th Meeting* (York), by the Very Rev. George Peacock, D.D., Dean of Ely, F.R.S., 1844, xxxi.
15*th Meeting* (Cambridge), by Sir John F. W. Herschel, Bart., F.R.S., 1845, xxvii.
16*th Meeting* (Southampton), by Sir Roderick I. Murchison, G.C.St.S., F.R.S., 1846, xxvii.
17*th Meeting* (Oxford), by Sir Robert Harry Inglis, Bart., D.C.L., M.P., F.R.S., 1847, xxix.
18*th Meeting* (Swansea), by the Marquis of Northampton, Pres. R.S., 1848, xxxi.
19*th Meeting* (Birmingham), by the

Addresses (continued):—
Rev. Thomas Romney Robinson, D.D., M.R.I.A., F.R.A.S., 1849, xxix.
20*th Meeting* (Edinburgh), by Sir David Brewster, K.H., D.C.L., F.R.S., V.P.R.S.Ed., 1850, xxxi.
21*st Meeting* (Ipswich), by George Biddell Airy, M.A., D.C.L., F.R.S., Astronomer Royal, 1851, xxxix.
22*nd Meeting* (Belfast), by Colonel Edward Sabine, R.A., Treas. and V.P.R.S., 1852, xli.
23*rd Meeting* (Hull), by William Hopkins, M.A., V.P.R.S., F.G.S., 1853, xli.
24*th Meeting* (Liverpool), by the Earl of Harrowby, F.R.S., 1854, lv.

Addresses (continued):—
25*th Meeting* (Glasgow), by the Duke of Argyll, F.R.S., 1855, lxxiii.
26*th Meeting* (Cheltenham), by Professor Charles Daubeny, M.D., F.R.S., 1856, xlviii.
27*th Meeting* (Dublin), by the Rev. Humphrey Lloyd, D.D., D.C.L., F.R.S. L. & E., V.P.R.I.A., 1857, xlvii.
28*th Meeting* (Leeds), by Richard Owen, M.D., D.C.L., V.P.R.S., F.L.S., 1858, xlix.
29*th Meeting* (Aberdeen), by His Royal Highness the Prince Consort, 1859, lix.
30*th Meeting* (Oxford), by the Lord Wrottesley, F.R.S., 1860, lv.

[In the Index of Authors of Reports which follows, the names of the Members of Committees by whom Reports were presented are included as Authors, though in several instances the Reports were drawn up or signed by only one of the Committee.]

REESE LIBRARY OF THE UNIVERSITY OF CALIFORNIA.

REPORTS, &c.

INDEX OF AUTHORS.

ABERCROMBIE (Dr.), report on the registration of deaths, 1835, 251.

ADAMS (R.), report on the motions and sounds of the heart, 1835, 243; 1836, 275.

——, report on the pathology of the brain and nervous system, 1836, 283.

AGASSIZ (Prof.), report on the fossil fishes of the Devonian system, or old red sandstone, 1842, 80.

——, synoptical table of British fossil fishes, 1843, 194.

——, rapport sur les poissons fossiles de l'argile de Londres (with translation), 1844, 279.

AIRY (G. B.), report on astronomy, 1831-32, 125.

——, report on the reduction of the Greenwich lunar and planetary observations, 1838, 315; 1840, 423.

——, report on the extension of the Royal Astronomical Society's Catalogue of Stars (British Association Catalogue of Stars), 1838, 316; 1839, 174; 1840, 425; 1841, 330; 1842, 206.

——, report on the reduction of the stars in the Histoire Céleste, 1838, 316; 1839, 174; 1840, 426; 1841, 330; 1842, 205; 1845, 339.

——, report on the reduction of Lacaille's stars in the Cœlum Australe Stelliferum, 1839, 171; 1840, 427; 1841, 327; 1842, 205; 1845, 339.

——, report on the hourly observations made at Plymouth, 1841, 328.

——, report on experiments with balloons, 1843, 128.

——, report on simultaneous magnetical and meteorological observations, 1845, 1, 52.

——, suggestions for the observation of the total eclipse of the sun, 1850, 361.

——, address at the Meeting at Ipswich, 1851, xxxix.

——, report for procuring a continuance of the magnetic and meteorological observatories, 1858, 295.

ALDER (J.), report on the British Nudibranchiate Mollusca, 1844, 24.

ALISON (Dr. W. P.), report on the registration of deaths, 1835, 251.

——, report on the vital statistics of large towns in Scotland, 1842, 121.

ALLMAN (Prof.), report on the periodical phenomena of animals and vegetables, 1845, 321.

—— on freshwater Polyzoa, 1850, 305.

ANDERSON (A.), report on the measurement of ships for tonnage, 1857, 62.

ANDERSON (Rev. Dr.), report on the excavations in Dura Den, 1860, 32.

ANDREWS (Dr. T.), report on the heat of combination, 1849, 63.

ARCHER (Prof. T. C.), report on the animal and vegetable products imported into Liverpool, 1857, 254.

ARGYLL (Duke of), memorial on the Ordnance Survey of Scotland, 1851, 370.

——, address at the Glasgow Meeting, 1855, lxxiii.

——, report on metals for ordnance, 1855, 100.

ARMSTRONG (Sir W. G.) on the application of water-pressure machinery, 1854, 417.

ASHWORTH (E.), report of experiments conducted at Stormontfield, near Perth, for the artificial propagation of salmon, 1856, 451.

ATHERTON (C.) on mercantile steam-transport economy, 1856, 423.

——, report on the measurement of ships for tonnage, 1856, 458; 1857, 62.

——, suggestions for statistical inquiry into the extent to which mercantile steam transport economy is affected by the constructive type of shipping, as respects the proportions of length, breadth, and depth, 1857, 112.

——, report on shipping statistics, 1858, 239.

—— on mercantile steam transport economy as affected by the consumption of coals, 1859, 124.

——, report on steam-ship performance, 1859, 268; 1860, 193.

BABINGTON (Prof. C. C.), report on the preservation of vegetative powers in seeds, 1841, 50.

——, report on the preservation of animal and vegetable substances, 1842, 40.

——, report on the varieties of the human race, 1843, 292; 1844, 93.

——, report on the periodical phenomena of animals and vegetables, 1845, 321.

Babington (Prof. C. C.), report on typical objects in natural history for local museums, 1855, 108; 1856, 461.
Bache (Dr. A. D.) on the magnetic observatory at Philadelphia, 1842, 209.
Baily (F.), report on the comparative measurement of the Aberdeen standard scale, 1835, 91.
——, report on the reduction of Greenwich observations of the moon, 1838, 315.
——, report on the establishment of an observatory at Liverpool, 1838, 316.
——, report on the reduction of the stars in the Histoire Céleste, 1838, 316; 1839, 174; 1840, 426; 1841, 330; 1842, 205.
——, report on the extension of the Astronomical Society's Catalogue of Stars (British Association Catalogue of Stars), 1838, 316; 1839, 174; 1840, 425; 1841, 330; 1842, 206.
——, report on the application to Government relative to the Royal Observatory at the Cape of Good Hope, 1839, 172.
——, report on the nomenclature of the stars, 1839, 172; 1840, 426; 1841, 44; 1843, 292; 1844, 32; Appendix, 34.
Baines (Rt. Hon. M. T.), report on the patent laws, 1859, 191.
Baird (Dr.), typical list of Entomostraca for local museums, 1855, 120.
Balfour (Prof.), report on typical objects in natural history for local museums, 1855, 108; 1856, 461.
——, report on dredging, 1856, 47.
Ball (R.), report on the marine zoology of Great Britain, 1840, 444; 1841, 331; 1842, 213.
——, report on the periodical phenomena of animals and vegetables, 1845, 321.
Barlow (P.), report on the strength of materials, 1833, 93.
Barlow (P. W.) on the mechanical effect of combining girders and suspension chains, and a comparison of the weight of metal in ordinary and suspension girders, to produce equal deflections with a given load, 1857, 238.
Bartlett (Mr.), report on the marine zoology of Britain, 1842, 213.
Bate (C. Spence), report on the British Edriophthalma, 1855, 18.
Bateman (J. F.) on the supply of water to towns, 1855, 62.
Beckley (R.), description of a self-recording anemometer, 1858, 306.
Beechey (Admiral), report on the effects produced upon the channels of the Mersey, by the alterations made in its banks, 1855, 143; 1856, 1.
Belcher (Capt. Sir E.), report on metals for ordnance, 1855, 100.
Bell (Dr. J. P.) on the character and measurements of degradation of the Yorkshire coast, 1853, 81.
Bell (T.), typical list of Podophthalma for local museums, 1855, 119.
Bellamy (H.), report on the marine zoology of Britain, 1842, 213.
Berkeley (Rev. M. J.), report on typical objects in natural history for local museums, 1855, 108; 1856, 461.
Binney (E. W.), report on the excavation made at the junction of the lower new red sandstone with the coal-measures at Collyhurst, near Manchester, 1843, 241.
Birt (W. R.), reduction of meteorological observations, 1841, 42; 1842, 208.
——, reports on atmospheric waves, 1844, 267; 1845, 112; 1846, 119, 372; 1847, 351; 1848, 35.
——, details of observations of meteors, 1849, 50.
——, report on electrical observations at Kew, 1849, 113.
——, observations of luminous meteors, 1850, 106; 1852, 232, 234; 1853, 15, 17, 21, 23, 25, 27, 34.
—— on a luminous beam seen in the sky, 1854, 410.
Blackwall (John), report on the structure, functions and economy of the Araneidea, 1844, 62.
Blake (J.), report on the physiological action of medicines, 1843, 115; 1845, 82; 1846, 27.
Boguslawski (Prof. Von), letter relative to the magnetical observatory at Breslau, 1840, 431.
—— on magnetic observations, 1842, 11; 1843, 59; 1844, 154.
—— on the comet of 1843; 1845, 86.
Bond (Prof. W. C.) on a meteor seen at Cambridge, U.S., 1855, 94.
Booth (Rev. Dr. J.) on the trigonometry of the parabola, and the geometrical origin of logarithms, 1856, 68.
Borreham (W. W.), observations of meteors, 1851, 39; 1852, 230, 233; 1853, 34.
Boult (J.), report on the changes in the channels of the Mersey, 1855, 143; 1856, 1.
Bowerbank (J. S.), report on typical objects in natural history for local museums, 1855, 108; 1856, 461.
—— on the vital powers of the Spongiadæ, 1856, 438; 1857, 121.
Brand (Mr.), report on engraving skeleton maps for recording the distribution of plants and animals, 1840, 445; 1841, 327.
Breadalbane (Marquis of), memorial on the Ordnance Survey of Scotland, 1851, 370.
Brewster (Sir D.), the honorary degree of D.C.L. conferred on, by the University of Oxford, 1831–32, 100.
——, report on optics, 1831–32, 308.
——, report on the hourly meteorological observations kept in Scotland, 1839, 27; 1840, 349; 1841, 329; 1842, 206; 1843, 292, 293; 1844, 391.

BREWSTER (Sir D.), report on the translation and publication of foreign scientific memoirs, 1841, 328; 1842, 210; 1843, 129.
——, report on experiments with balloons, 1841, 55.
——, report on the erection of Osler's anemometer at Inverness, 1841, 329; 1842, 206.
—— report on the action of gaseous and other media on the solar spectrum, 1841, 329; 1843, 293.
——, address at the Edinburgh Meeting, 1850, xxxi.
——, memorial on the Ordnance Survey of Scotland, 1851, 370.
——, report on the scientific objects to be sought for by continuing balloon ascents, 1860, 43.
BRIGGS (Maj.-General J.) on the aboriginal tribes of India, 1850, 169.
BRISBANE (Sir T. M.) on magnetical and meteorological observations, 1845, 33.
BRODERIP (W. J.), report on zoological nomenclature, 1842, 105; 1843, 119.
BROUN (J. A.) on magnetic and meteorological observations, 1845, 34.
BROWN (R.), the honorary degree of D.C.L. conferred on, by the University of Oxford, 1831–32, 100.
——, report on the translation and publication of foreign scientific memoirs, 1840, 446; 1841, 328; 1842, 210; 1843, 129.
BRYCE (J., jun.), report on registering shocks of earthquakes in Great Britain, 1842, 92; 1843, 120.
—— report on the mud of rivers, 1841, 330.
BUCK (Mr.), report on the consumption of fuel and prevention of smoke, 1843, 294.
BUCKLAND (Rev. Dr.), address at the Oxford Meeting, 1831–32, 96.
—— on the fossil remains of the Megatherium, from South America, 1831–32, 104.
——, address on resigning the President's Chair, 1833, ix.
——, report on the application to government for a depository for mining records, 1839, 174.
——, notice relative to the report on the fossil fishes of the old red sandstone of Great Britain, 1841, 331.
——, report on coloured drawings of the sections of strata exposed in railway excavations, 1841, 331; 1842, 38; 1843, 295.
——, report on registering the shocks of earthquakes in Great Britain, 1842, 92; 1843, 120; 1844, 85.
BUCKMAN (Prof.), report on the growth of plants in the garden of the Royal Agricultural College, Cirencester, 1857, 200; 1859, 22; 1860, 34.
BUDD (J. P.) on the advantageous use of the gaseous escape from the blast-furnaces at the Ystalyfera iron works, 1848, 75.
BUDDLE (J.), report on the application to Government for a depository for mining records, 1839, 174.
BUIST (Dr.), meteorological observations made at the observatory, Bombay, 1845, 75.
——, notices of observations of luminous meteors, 1849, 3, 34; 1850, 118; 1851, 43, 50; 1852, 238.
BULARD (C.), observations of luminous meteors, 1852, 191–197; 1854, 410.
BUNSEN (Prof.), report on the gases evolved from iron furnaces, with reference to the theory of the smelting of iron, 1845, 142.
——, photochemical researches, 1856, 62.
BUNSEN (Dr. C. C. J.) on the results of the Egyptian researches in reference to Asiatic and African ethnology, and the classification of languages, 1847, 254.
BUNT (T. G.) account of the leveling operations between the Bristol Channel and the English Channel, 1838, 11.
——, on tide calculations, 1839, 13; 1840, 439; 1841, 30.
BURLINGTON (Earl of), report on the reduction of the Greenwich observations of the moon, 1838, 315.
BUSK (G.), typical list of Polyzoa for local museums, 1855, 117.
——, typical list of Anthozoa for local museums, 1855, 121.

CAITHNESS (Earl of), report on steam-ship performance, 1859, 268; 1860, 193.
CARLILE (Dr. H.), report on the motions and sounds of the heart, 1835, 243; 1836, 275.
CARPENTER (P. P.), report on the Mollusca of the west coast of North America, 1856, 159.
CARPENTER (Dr. W. B.) on the microscopic structure of shells, 1844, 1; 1847, 93.
CARTE (Dr.), report on the marine fauna of the S. and W. coasts of Ireland, 1858, 176.
——, report on dredging Dublin Bay, 1858, 262; 1859, 80; 1860, 27.
CAVENDISH, on the discoveries of, 1839, 6–68.
——, extracts from his MSS., 1839, 45.
——, lithographic extracts from MS. of, 1839, 69.
CAYLEY (A.), report on the formation of a catalogue of philosophical memoirs, 1856, 463.
——, report on theoretical dynamics, 1856, 462; 1857, 1; memoirs and works referred to, 40.
——, report on the progress in the solution of certain special problems in dynamics, 1859, 310.
CHADWICK (E.), report on the vital statistics of large towns in Scotland, 1842, 121.

Challis (Rev. Prof. J.), report on the analytical theory of hydrostatics and hydrodynamics, 1833, 131.
——, report on the theory of capillary attraction, 1834, 253.
——, supplementary report on the mathematical theory of fluids, 1836, 225.
——, report on the reduction of the Greenwich observations of the moon, 1838, 315.
——, report on the British Association Catalogue of Stars, 1845, 340.
——, drawings of different features of a portion of the moon's surface, comprising Plato, the Alps, the valley of the Alps, and Cassini, 1854, 415.
Chambers (C.), supplementary notes to Mr. Crookes's description of the wax-paper photographic process for photometeorographic registration, 1859, 220.
Chesney (Major-General) on the construction and general use of efficient life-boats, 1854, 327.
Chevallier (Rev. Prof.) on brilliant meteors, 1850, 107; 1851, 42.
Christie (Prof. S. H.), report on the magnetism of the earth, 1833, 105.
Christison (Dr.), report on chemical notation, 1835, 207.
——, report on the registration of deaths, 1835, 251.
Clark (Prof. W.), report on animal physiology, 1834, 95.
Clark (Dr.), report on chemical notation, 1835, 207.
——, report on the preservation of animal and vegetable substances, 1840, 421.
Cleghorn (Dr. H.), report on the probable effects in an economical and physical point of view of the destruction of tropical forests, 1851, 78.
Clendinning (Dr. J.), report on the motions and sounds of the heart, 1836, 261; 1840, 163, 173.
Colby (Col.), report on a level line, measured from the Bristol Channel to the English Channel, 1838, 1.
Connal (M.), report on animal, vegetable, and mineral substances imported from foreign countries into the Clyde, 1858, 185.
Conybeare (Rev. W. D.), report on geology, 1831–32, 365.
Couch (J.), report on the marine zoology of Britain, 1842, 213.
——, list of British fish for local museums, 1855, 113.
Crookes (W.), description of the wax-paper photographic process employed for the photometeorographic registrations at the Radcliffe observatory, 1859, 206.
Cull (R.), manual of ethnological inquiry, being a series of questions concerning the human race, 1852, 243.
Cumming (Rev. Prof.), report on thermo-electricity, 1831–32, 301.
Cumming (Rev. Prof.), report on chemical notation, 1835, 207.
——, report on the preservation of animal and vegetable substances, 1840, 421.
Dalton (John), the honorary degree of D.C.L. conferred on, by the University of Oxford, 1831–32, 100.
——, report on chemical notation, 1835, 207.
Daniell (Prof.), report on chemical notation, 1835, 207.
Darwin (C.), report on the varieties of the human race, 1840, 447; 1841, 52, 332.
——, report on zoological nomenclature, 1842, 105; 1843, 119.
——, typical list of Cirripedia for local museums, 1855, 121.
Daubeny (Dr.), address at the Bristol Meeting, 1836, xxi.
——, report on mineral and thermal waters, 1836, 1.
——, on the growth of plants confined in glass vessels, 1837, 505.
——, report on the growth and vitality of seeds, 1842, 34; 1843, 105; 1844, 94; 1845, 337; 1846, 20; 1847, 145; 1848, 31; 1849, 78; 1850, 160; 1851, 53; 1852, 177; 1853, 67; 1854, 439; 1855, 78; 1857, 43.
—— on the influence of carbonic acid gas on the health of plants, especially of those allied to the fossil remains found in the coal formation, 1848, 97; 1849, 56; 1850, 159.
—— on the nomenclature of organic compounds, 1851, 124.
——, address at the Cheltenham Meeting, 1856, xlviii.
Davis (J.), report on the internal changes in the constitution of metals, 1843, 294.
Davy (Prof. E.), report on the action of water on iron, 1838, 253; 1839, 171.
De la Beche (Sir H. T.), report on the application to Government for a depository for mining records, 1839, 174.
——, report on coloured drawings of railway sections, 1841, 331; 1842, 38; 1843, 295.
De la Rue (W.), report on celestial photography in England, 1859, 130.
Denny (H.), notice of his works on Anoplura, 1841, 331; 1844, 392; 1845, 342.
Devonshire (Duke of), *vide* Earl of Burlington.
Dickie (Dr. G.), report on the marine zoology of Strangford Lough, Co. Down, and corresponding part of the Irish Channel, 1857, 104.
——, report of the Belfast dredging committee, 1857, 220; 1858, 282; 1859, 116.
Dillwyn (W. L.), report on the application to Government for a depository for mining records, 1839, 174.
Dobson (T.), report on the relation between explosions in coal-mines and revolving storms, 1855, 1.

DONALDSON (Rev. Dr. J. W.) on two unsolved problems in Indo-German philology, 1851, 138.
DOUGLAS (D.), magnetical observations, 1837, 27.
DOVE (Prof.) on magnetical and meteorological observations, 1845, 24, 57.
——, temperature tables, 1847, 373; supplement, 1848, 84.
——, remarks on the monthly isothermal lines of the globe, and on some of the principal conclusions in regard to climatology deducible from them: with an introductory notice by Lieut.-Col. Sabine, 1848, 85.
DREW (J.) on the climate of Southampton, 1851, 54.
DUBLIN COMMITTEE, on the pathology of the brain and nervous system, 1836, 283.
DUBLIN SUB-COMMITTEE, Report on the motions and sounds of the heart, 1835, 243; 1836, 275.
DUFFERIN (Lord), report on steam-ship performance, 1859, 268; 1860, 193.

EARLE (H.), report on railway constants, 1838, 197.
EDDY (S.) on the lead-mining districts of Yorkshire, 1858, 167.
EDINBURGH SUB-COMMITTEE, report on the registration of deaths, 1835, 251.
EGERTON (Lord FRANCIS), address at the Manchester Meeting, 1842, xxxi.
EGERTON (Sir P.), report on the application to Government for a depository for mining records, 1839, 174.
——, report on the effects produced upon the channels of the Mersey, by alterations made in its banks, 1856, 1.
EGERTON (Hon. Capt.), report on steam-ship performance, 1860, 193.
ELLESMERE (Earl of), *vide* Lord F. Egerton.
ELLIS (R. L.), report on the progress of analysis (theory of the comparison of transcendentals), 1846, 34.
ELY (Dean of). *Vide* Rev. G. Peacock.
ENYS (J.), report on a constant indicator for steam-engines, 1841, 307; 1842, 98.
ENYS (J. S.), report on the application to Government for a depository for mining records, 1839, 174.
——, report of experiments on steam-engines, 1843, 104; 1844, 90.
ERICHSEN (Mr.), notice of researches on asphyxia, 1843, 294.
ERMAN (Dr. ADOLPHE) on magnetical and meteorological observations, 1845, 38.
—— on the calculation of the Gaussian constants, 1846, 92; 1847, 377; 1848, 98.
ERMAN (PAUL) on the influence of friction upon thermo-electricity, 1845, 102.
ETTON (T. C.), report on the oyster-beds and oysters of the British shores, 1856, 368.
——, report on dredging, 1856, 47.

FAIRBAIRN (W.), report on the strength and other properties of cast iron obtained from the hot and cold blast, 1837, 377; 1842, 88.
FAIRBAIRN (W.), report on the consumption of fuel and prevention of smoke, 1843, 294; 1844, 100, 118.
——, report on the internal changes in the constitution of metals, 1843, 294.
——, researches to determine the strength of locomotive boilers, and the causes which lead to explosion, 1853, 53.
—— on the mechanical properties of metals as derived from repeated meltings, exhibiting the maximum point of strength and the causes of deterioration, 1853, 87.
——, report on metals for ordnance, 1855, 100.
—— on the tensile strength of wrought iron at various temperatures, 1856, 405.
—— on the resistance of tubes to collapse, 1857, 215.
——, report on the patent laws, 1858, 164; 1859, 191.
—— on the collapse of glass globes and cylinders, 1858, 174.
——, report on shipping statistics, 1858, 239.
——, experiments to determine the efficiency of continuous and self-acting breaks for railway trains, 1859, 76.
——, report on steam-ship performance, 1859, 268; 1860, 193.
——, experiments to determine the effect of vibratory action and long-continued changes of load upon wrought-iron girders, 1860, 45.
FARADAY (Prof.), the honorary degree of D.C.L. conferred on, by the University of Oxford, 1831–32, 100.
——, report on chemical notation, 1835, 207.
——, report on experiments with balloons, 1859, 289.
FASEL (F. Vnt.), observations of luminous meteors, 1854, 412.
FITZWILLIAM (Earl), *vide* Vicount Milton.
FLEMING (Dr.), report of experiments conducted at Stormontfield near Perth, for the artificial propagation of salmon, 1856, 451.
FORBES (Prof. E.), report on the distribution of pulmoniferous Mollusca in the British Isles, 1839, 127.
——, report on the marine zoology of Britain, 1840, 444; 1841, 331; 1842, 213; 1850, 192.
——, report on engraving skeleton maps for recording the distribution of plants and animals, 1840, 445; 1841, 327.
——, report on the Mollusca and Radiata of the Ægean Sea, and on their distribution, considered as bearing on geology, 1843, 130.
——, examples of dredging papers, 1843, 180.
——, report on dredging operations round the coasts of Anglesea, 1844, 390; 1845, 341.
——, report on the periodical phenomena of animals and vegetables, 1845, 321.

FORBES (Prof. E.), report for procuring drawings of the radiate animals of the British Islands, 1840, 444.
FORBES (Prof. J. D.), report on meteorology, 1831–32, 196; supplementary report, 1840, 37.
——, address at the Edinburgh Meeting, 1834, xi.
——, report of experiments on subterranean temperature, 1836, 291.
——, report on the temperature and conducting power of different strata, 1838, 315; 1840, 434.
——, report on the hourly meteorological observations in Scotland, 1839, 27; 1840, 349; 1841, 329; 1842, 206; 1843, 292, 293.
——, report on the action of Osler's anemometer at Edinburgh, 1840, 435.
——, report for causing a plate to be engraved for printing paper ruled in squares, 1840, 436.
——, report on registering shocks of earthquakes in Great Britain, 1841, 46; 1842, 92; 1843, 120; 1844, 85.
——, report on the erection of Osler's anemometer at Inverness, 1842, 206; 1843, 292.
——, suggestions for the observation of the total eclipse of the sun, 1850, 361.
——, memorial on the Ordnance Survey of Scotland, 1851, 370.
—— on the laws of the conduction of heat, 1852, 260.
——, report on earthquakes and seismometers, 1854, 370.
——, report on the scientific objects to be sought for by continuing balloon ascents, 1860, 43.
FORCHHAMMER (Prof.) on the influence of fucoidal plants upon the formations of the earth, on metamorphism in general, and particularly the metamorphosis of the Scandinavian alum-slate, 1844, 155.
—— on comparative analytical researches on sea-water, 1846, 90.
FOSTER (G. C.), report on the progress and state of organic chemistry, 1859, 1.
FOX (R. W.), report of experiments on the electricity of metallic veins, and the temperature of mines, 1837, 133.
——, magnetic observations, 1838, 67, 89, 101, 147.
——, report of observations on subterranean temperature, 1840, 309.
——, report on the temperature of some deep mines in Cornwall, 1857, 96.
——, report on the magnetic survey of Great Britain, 1857, 130; 1858, 185.
FREYCINET'S (Capt.) magnetic observations, 1837, 35.

GAGES (A.), report on the results obtained by the mechanico-chemical examination of rocks and minerals, 1859, 65.
GARNONS (Rev. W. L. P.), report on the preservation of animal and vegetable substances, 1842, 40.
GARRETT (J. R.), the freshwater fishes of Ulster, as in the MSS. of the late W. Thompson, 1852, 290.
——, supplementary report on the fauna of Ireland, by the late W. Thompson, 1852, 290.
GASSIOT (J. P.), report on experiments with balloons, 1859, 289.
GAUSS (CH. F.) on magnetical and meteorological observations, 1845, 42, 64.
GILBERT (D. G.), report on the application to Government for a depository for mining records, 1839, 174.
GILBERT (Dr. J. H.) on the composition of foods, in relation to respiration and the feeding of animals, 1852, 323.
—— on the equivalency of starch and sugar in food, 1854, 421.
GILMORE (ALLAN), report on the measurement of ships for tonnage, 1856, 458.
GLADSTONE (Dr. J. H.) on the influence of the solar radiations on plants, 1852, 239; 1854, 373; 1855, 15.
——, observations of luminous meteors, 1858, 145; 1859, 88.
——, report on luminous meteors, 1860, 1.
GLAISHER (J.), report on luminous meteors, 1860, 1.
GLYNN (J.) on the turbine or horizontal water-wheel of France and Germany, 1847, 147.
—— on water-pressure engines, 1848, 11.
GODERICH (Lord), report on the patent laws, 1859, 191.
GODWIN (J.) on railway-bar corrosion, 1849, 95.
GOODSIR (Prof.), report on the marine zoology of Britain, 1840, 444; 1841, 331; 1842, 213.
——, report on procuring drawings of the Radiate animals of the British Islands, 1840, 444.
GRAHAM (Prof. R.) on the remarkable plants of the neighbourhood of Dublin, Edinburgh, and south-west of Scotland, 1836, 253.
——, report on the engraving of skeleton maps for recording the distribution of plants and animals, 1840, 445; 1841, 327.
——, report on the translation and publication of foreign scientific memoirs, 1841, 328; 1842, 210; 1843, 129.
GRAHAM (Sir JAMES), report on steam-ship performance, 1859, 268.
GRAHAM (T.), report on chemical notation, 1835, 207.
——, report on the translation and publication of foreign scientific memoirs, 1841, 328; 1842, 210; 1843, 129.
——, report on the patent laws, 1858, 164.
GRANT (R.), report on the formation of a catalogue of philosophical memoirs, 1856, 463.
GRANTHAM (J.), report on the deviations of the compass needle in iron and other vessels, 1855, 143.

GRAY (Dr. J. E.), report for procuring drawings of the Radiate animals of the British Islands, 1840, 444.
——, report on engraving skeleton maps for recording the distribution of plants and animals, 1840, 445; 1841, 327.
——, report on the marine zoology of Britain, 1840, 444; 1841, 331; 1842, 213.
——, report on the varieties of the human race, 1840, 447; 1841, 52, 332; 1843, 292; 1844, 93.
GRAY (W.), report on the quantities of rain falling at different elevations at York, 1835, 171.
GREENE (Dr. G.), report on the motions and sounds of the heart, 1835, 243; 1836, 275.
——, report on the pathology of the brain and nervous system, 1836, 283.
GREENE (Prof. J. REAY), report on the marine fauna of the S. and W. coasts of Ireland, 1858, 176.
——, report on dredging Dublin Bay, 1858, 262; 1859, 80; 1860, 27.
GREENOCK (Lord), report on registering shocks of earthquakes in Great Britain, 1841, 46; 1842, 92; 1843, 120; 1844, 85.
GREENOUGH (G. B.), report on a level line, measured from the Bristol Channel to the English Channel, 1838, 1.
GREG (R. P.) on a luminous meteor, 1855, 94.
——, report on luminous meteors, 1860, 1.
——, catalogue of meteorites and fireballs, 1860, 48.
GREGORY (Dr.), report on chemical notation, 1835, 207.
GRENVILLE, (Dr.), report on dredging in the Frith of Clyde, 1856, 47.
——, report on engraving skeleton maps for recording the distribution of plants and animals, 1840, 445; 1841, 327.
GRIFFITH (Sir Rich.), report on a level line, measured from the Bristol Channel to the English Channel, 1838, 1.
GRUBB (T.), report on the improvement of telescope and equatorial mountings, 1857, 195.

HADOW (Mr.), report on the state of our knowledge regarding the photographic image, 1859, 103.
HALLIDAY (A. H.), summary of the Insects of Ireland, 1843, 290.
HAMILTON (Sir W. R.), address at the Dublin Meeting, 1835, xli.
—— on Mr. Jerrard's method of transforming and resolving equations, 1836, 295.
——, report on the reduction of the Greenwich observations of the moon, 1838, 315.
——, report on the determination of the arc of longitude between the observatories of Armagh and Dublin, 1839, 19.
HANCOCK (A.), report on the British Nudibranchiate Mollusca, 1844, 24.
HANSTEEN (Prof.), researches in terrestrial magnetism, 1835, 61.
HARCOURT (Rev. W. V.), address and exposition of the objects and plan of the Association, 1831-32, 17, 21.
HARCOURT (Rev. W V,), address at the Birmingham Meeting, 1839, xxix.
——, report on a gas-furnace for experiments on vitrifaction and other applications of high heat in the laboratory, 1844, 82.
——, report on the crystalline slags, 1846, 351.
——, report on the effects of long-continued heat, illustrative of geological phenomena, 1860, 175.
HARDWICH (T. F.), report on the state of our knowledge regarding the photographic image, 1859, 103.
HARDWICKE (Earl of), report on the measurement of ships for tonnage, 1857, 62.
HARDY (J.), table for the registration of periodic phenomena at Penmanshiel, 1850, 344.
HARGREAVE (Dr. C. J.) on the algebraic couple; and on the equivalents of indeterminate expressions, 1857, 184.
HARRIS (Sir W. S.), report on the hourly observations of the thermometer at Plymouth, 1835, 181; 1838, 21; 1839, 149; 1841, 328; 1842, 30.
——, report of experiments on subterranean temperature, 1836, 291.
——, report on Prof. Whewell's anemometer, 1840, 157; 1841, 36.
——, report on registering shocks of earthquakes in Great Britain, 1842, 92; 1843, 120.
——, report on the results of the discussion of the meteorological observations made at Plymouth and Devonport, 1843, 291.
——, report on Whewell and Osler's anemometers at Plymouth, 1844, 241.
HARRISON (J. P.) on lunar influence on temperature, 1857, 248; 1859, 193.
HARROWBY (Earl of), address at the Meeting at Liverpool, 1854, lv.
——, report on the changes in the channels of the Mersey, 1855, 143; 1856, 1.
——, report on the patent laws, 1858, 164.
HART (Dr. J.), report on the motions and sounds of the heart, 1836, 275.
HENDERSON (Mr.), report on the reduction of Lacaille's stars, 1839, 171; 1840, 427; 1841, 327; 1842, 205.
HENDERSON (A.) on life-boats, 1855, 143.
——, report on the effects produced on the channels of the Mersey by the alterations made in its banks, 1856, 1.
——, report on the measurement of ships for tonnage, 1856, 458; 1857, 62.
——, report on the statistics of life-boats and fishing-boats on the coasts of the United Kingdom, 1857, 308.
——, report on shipping statistics, 1858, 239.
——, on river steamers, their form, construction, and fittings, with reference to improving the shallow-water navigation on the rivers of India, 1858, 268.

HENFREY (Prof. A.), report on the registration of the periodic phenomena of plants and animals, 1849, 78.
——, on the reproduction and supposed existence of sexual organs in the higher cryptogamous plants, 1851, 102.
HENRY (Dr. W.), an essay on the philosophical character of Dr. Priestley, 1831–32, 60.
——, report on the laws of contagion, 1834, 67.
HENRY (Dr. W. C.), report on the physiology of the nervous system, 1833, 59.
HENRY (Prof.) on the system of meteorological observations proposed to be established in the United States, 1851, 320.
HENSLOW (Rev. Prof.), report on the preservation of animal and vegetable substances, 1840, 421.
——, report on zoological nomenclature, 1842, 105; 1843, 119.
——, report on the growth and vitality of seeds, 1842, 34; 1843, 105; 1844, 94; 1845, 337; 1846, 20; 1847, 145; 1848, 31; 1849, 78; 1850, 160; 1851, 53; 1852, 177; 1853, 67; 1854, 439; 1855, 78; 1857, 43.
——, report on the registration of the periodic phenomena of plants and animals, 1849, 78.
——, report on typical objects in natural history adapted to local museums, 1855, 108; 1856, 461.
——, list of objects for a typical herbarium for local museums, 1855, 124.
HERSCHEL (Sir J. F. W.), report on magnetical and meteorological observations, 1839, 31; 1840, 427; 1841, 38; 1842, 1; 1843, 54; 1844, 143; 1845, 1.
——, report on the nomenclature of the stars, 1839, 172; 1840, 426; 1841, 44; 1843, 292; 1844, 32; Appendix, 34.
——, report on the application to Government relative to the Observatory at the Cape of Good Hope, 1839, 172.
——, report on the reduction of Lacaille's stars, 1839, 171; 1840, 427; 1841, 327; 1842, 205; 1845, 339.
——, report on the reduction of meteorological observations made at the equinoxes and solstices, 1839, 173; 1840, 432; 1841, 42; 1842, 208; 1843, 60, 295.
——, report on the translation and publication of foreign scientific memoirs, 1840, 446; 1841, 328; 1842, 210; 1843, 129.
——, report on providing meteorological instruments for M. Agassiz and Mr. M'Cord, 1841, 41.
——, report on experiments with balloons, 1841, 55; 1843, 128.
——, address at the Cambridge Meeting, 1845, xxvii.
——, report on the reduction of Lalande's stars in the *Histoire Céleste*, 1845, 339.
——, report on the completion of the catalogues of Lalande and Lacaille stars, 1847, 379.
HERSCHEL (Sir J. F. W.), suggestions for the observation of the total eclipse of the sun, 1850, 361.
——, report for procuring a continuance of the magnetic and meteorological observatories, 1858, 295.
HEYWOOD (J.), report on the vital statistics of large towns in Scotland, 1842, 121.
——, report on the patent laws, 1858, 164; 1859, 191.
HILL (Commissioner), report on the patent laws, 1858, 164.
HINCKS (Rev. T.), list of Polyzoa from Belfast Bay, 1858, 293.
HODGES (Dr.) on the composition and economy of the flax plant, 1852, 273.
——, report on the gases evolved in steeping flax, and on the composition and economy of the flax plant, 1853, 67.
—— on flax, 1857, 126.
HODGKIN (Dr.), report on the effects of acrid poisons, 1835, 211.
——, report on the communications between the arteries and absorbents, 1836, 289.
——, report on the composition of secretions, and the organs producing them, 1837, 139, 149.
——, report on the varieties of the human race, 1840, 447; 1841, 52, 332; 1843, 292; 1844, 93; 1845, 342.
——, manual of ethnological inquiry, being a series of questions concerning the human race, 1852, 243.
HODGKINSON (Prof. E.) on impact upon beams, 1835, 93.
—— on the strength and other mechanical properties of cast iron obtained by hot and cold blast, 1837, 337.
——, report on a constant indicator for steam-engines, 1841, 307; 1842, 98.
——, report of experiments on the resistance of air, 1842, 211.
—— on the strength of stones and other materials, 1842, 211.
——, report of experiments on steam-engines, 1843, 104; 1844, 90.
——, on the consumption of fuel and prevention of smoke, 1843, 294.
——, report on the internal changes in the constitution of metals, 1843, 294.
HODGSON (B. H.), collection of skulls of various tribes of mankind inhabiting Nepal, Prof. Owen's report on, 1859, 95.
HOOKER (Dr. J. D.), report on typical objects in natural history for local museums, 1855, 108; 1856, 461.
HOPE (Dr.), report on chemical notation, 1835, 207.
HOPKINS (W.), report on the geological theories of elevation and earthquakes, 1847, 33.
——, address at the Hull Meeting, 1853, xli.
HORNER (L.), report on registering shocks of earthquakes in Great Britain, 1842, 92; 1843, 120.

HOULDSWORTH (Mr.), report on the consumption of fuel and prevention of smoke, 1843, 294; 1844, 100.
HUDSON (Dr. H.) on the phenomena usually referred to the radiation of heat, 1835, 163.
HUMBOLDT (Baron A. von) on magnetical and meteorological observations, 1845, 64.
HUNT (R.), report on the influence of light on the germination of seeds and the growth of plants, 1842, 75; 1844, 29; 1846, 33.
——, report on the actinograph, 1845, 90; 1846, 31.
—— on the influence of the solar rays on the growth of plants, 1847, 17.
——, report on the action of carbonic acid on the growth of plants allied to those of the coal formations, 1848, 84.
——, report on the chemical action of the solar radiations, 1850, 137; 1852, 262; 1853, 68.
HUNT (T. C.), results of meteorological observations taken at St. Michael's, 1850, 133.
HUXLEY (Prof.), report on typical objects in natural history for local museums, 1855, 108; 1856, 461.
—— on a scheme to exhibit the equivalent classes and subclasses of the animal kingdom, 1855, 128.
HYNDMAN (G. C.), report of the Belfast dredging committee, 1857, 220; 1858, 282; 1859, 116.

INGLIS (Sir R. H.), address at the Oxford Meeting, 1847, xxix.

JACOB (Prof. A.) on the infraorbital cavities in deers and antelopes, 1835, 208.
JARDINE (Sir W.), report on Anoplura, 1841, 331; 1844, 392.
——, report on the translation and publication of foreign scientific memoirs, 1841, 328; 1842, 210; 1843, 129.
——, report on typical objects in natural history for local museums, 1855, 108; 1856, 461.
——, report of experiments conducted at Stormontfield, near Perth, for the artificial propagation of salmon, 1856, 451.
JEFFREYS (J. G.), list of Testacea found in dredged sand from the Turbot Bank, near Belfast Bay, 1858, 287.
JENYNS (Rev. L.), report on zoology, 1834, 143.
——, report on the preservation of animal and vegetable substances, 1840, 421.
——, report on zoological nomenclature, 1842, 105; 1843, 119.
——, report on the registration of the periodic phenomena of plants and animals, 1849, 78.
JOHNSON (Capt.), magnetic observations, 1838, 59.
JOHNSTON (Dr. G.), report on the marine zoology of Britain, 1840, 444; 1841, 331; 1842, 213.
——, report on procuring drawings of the radiate animals of the British Islands, 1840, 444.
——, report on typical objects in natural history for local museums, 1855, 108; 1856, 461.
JOHNSTON (Prof. J. F. W.), report on the progress and state of chemical science, 1831–32, 414.
——, report on chemical notation, 1835, 207.
——, report on dimorphous bodies, 1837, 163.
——, report on the application to Government for a depository for mining records, 1839, 174.
——, report on inorganic chemistry, 1840, 443.
——, report of committee to inquire into the statistics of the mining districts, 1840, 446.
JOY (Dr. B.), report on the motions and sounds of the heart, 1835, 243; 1836, 275.

KANE (Sir R.), report on the chemical history of colouring matters, 1843, 292.
KEDDIE (W.), report on animal, vegetable, and mineral substances imported from foreign countries into the Clyde, 1858, 185.
KELLAND (Rev. Prof.), report on our theoretical and experimental knowledge of the laws of conduction of heat, 1841, 1.
KENNEDY (Dr. E.), report on the motions and sounds of the heart, 1835, 243; 1836, 275.
KINAHAN (Dr. J. R.), report of Dublin dredging committee, 1858, 262; 1859, 80.
——, report on Crustacea of Dublin district, 1858, 262.
——, list of Crustacea inhabiting Belfast Bay, 1858, 291.
——, report on the marine fauna of the S. and W. coasts of Ireland, 1858, 176.
——, report on dredging Dublin Bay, 1860, 27.
KITSON (J.), report on steam-ship performance, 1859, 268.
KREIL (M.) on magnetical and meteorological observations, 1845, 45.
KUPFFER (M.) on magnetical and meteorological observations, 1845, 18.

LAMONT (Dr.) on the system of meteorological and magnetical observations on the continent, 1842, 207.
—— on magnetical and meteorological observations, 1845, 22, 63.
LANGBERG (Prof.) on the specific gravity of sulphuric acid at different degrees of dilution, and on the relation which exists between the development of heat and the coincident contraction of volume in

sulphuric acid when mixed with water, 1847, 1.
Lankester (Dr. E.), report on Anoplura, 1841, 331; 1844, 392.
——, report on the varieties of the human race, 1843, 292; 1844, 93.
——, report on the registration of the periodic phenomena of plants and animals, 1845, 321; 1849, 78; 1850, 338.
——, report on typical objects in natural history for local museums, 1855, 108; 1856, 461.
Lardner (Dr.), report on the determination of the mean numerical value of railway constants, 1838, 197; 1841, 205.
Latham (Dr. R. G.) on ethnographical philology, 1847, 154.
Law (Dr. R.), report on the motions and sounds of the heart, 1835, 243; 1836, 275.
Lawes (J. B.) on the composition of foods, in relation to respiration and the feeding of animals, 1852, 323.
—— on the equivalency of starch and sugar in food, 1854, 421.
Lawson (H.), observations of luminous meteors, 1852, 190.
Lee (Dr. J.), report on experiments with balloons, 1859, 289.
Lemon (Sir C.), report on the application to Government for a depository for mining records, 1839, 174.
Lindley (Prof.), report on the philosophy of botany, 1833, 27.
——, report on the preservation of vegetative powers in seeds, 1841, 50.
——, report on the growth and vitality of seeds, 1842, 34; 1843, 105; 1844, 94; 1845, 337; 1846, 20; 1847, 145; 1848, 31; 1849, 78; 1850, 160; 1851, 53; 1852, 177; 1853, 67; 1854, 439; 1855, 78; 1857, 43.
Llewelyn (J. D.), report on the state of our knowledge regarding the photographic image, 1859, 103.
Lloyd (Rev. Dr. H.), report on physical optics, 1834, 295.
—— on the direction and intensity of the terrestrial magnetic force in Ireland, 1835, 117.
—— on the magnetic survey of Ireland, 1838, 91–118, 151, 165–186.
——, magnetic observations in England, 1838, 68, 138, 151.
——, report on simultaneous magnetical and meteorological observations, 1839, 31; 1840, 427; 1841, 38; 1842, 1; 1843, 54; 1844, 143; 1845, 1, 35.
——, report on the expediency of continuing the Toronto magnetical and meteorological observatory, 1848, 99.
——, address at the Dublin Meeting, 1857, xlvii.
——, report on the magnetic survey of Great Britain, 1857, 130; 1858, 185.
—— on the instruments employed in the magnetic survey of Ireland, 1858, 260.
Lloyd (Rev. Dr. H.), report for procuring a continuance of the magnetic and meteorological observatories, 1858, 295.
——, report on the scientific objects to be sought for by continuing balloon ascents, 1860, 43.
Locke (J.), report on railway constants, 1838, 197.
London Committee, report on the motions and sounds of the heart, 1836, 261; 1837, 155; 1838, 317; 1840, 163.
——, report on the communication between the arteries and absorbents, 1836, 289.
Loomis (Prof.) on magnetical and meteorological observations, 1845, 20.
Lord (Lieut. W.), report on the state of the river Mersey, 1856, 19, 24, 26.
Lowe (E. J.), observations of luminous meteors, 1848, 6; 1849, 11–37, 43, 44; 1850, 93, 115; 1851, 17, 38, 49; 1852, 198; 1853, 3; 1854, 406; 1855, 80, 99; 1856, 56, 61; 1857, 138; 1858, 146; 1859, 82; 1860, 3.
——, report on luminous meteors, 1860, 1.
Lubbock (Sir J. W.), report on the tides, 1831–32, 189.
——, report on the discussions of observations of the tides, 1836, 285; 1837, 103.
——, report on the reduction of the Greenwich observations of the moon, 1838, 315.
——, report on experiments with balloons, 1841, 55; 1843, 128.
Lucas (Mr.), report on the internal changes in the constitution of metals, 1843, 294.
Lyell (Sir C.), report on the application to Government for a depository for mining records, 1839, 174.
Lyte (Mr.), report on the marine zoology of Britain, 1842, 213.

M'Andrew (R.), dredging operations round the coasts of Anglesea, 1844, 390.
—— on the distribution and range in depth of Mollusca and other marine animals on the coasts of Spain, Portugal, Barbary, Malta, and Southern Italy, 1850, 264.
——, report on the Mollusca of the north-east Atlantic and neighbouring seas, 1856, 101.
——, list of the British marine invertebrate fauna, 1860, 217.
Macartney (Dr. J.), report on the motions and sounds of the heart, 1836, 275.
M'Connell (J. E.), report on steam-ship performance, 1859, 268; 1860, 193.
Macdonnell (Dr. J.), report on the pathology of the brain and nervous system, 1836, 283.
M'Dowell (Dr. E.), report on the motions and sounds of the heart, 1835, 243.
Macfarlane (P.), earthquake-shocks registered at Comrie by, 1844, 85.
Macgregor (J.), report on the measurement of ships for tonnage, 1857, 62.
Mackay (J. T.) on the remarkable plants of

the neighbourhood of Dublin, Edinburgh, and south-west of Scotland, 1836, 253.
MACKAY (J. T.) on the plants which characterize Scotland and Ireland, 1836, 257.
MACNEILL (J.), report on railway constants, 1838, 197.
MALLET (R.), report on the action of water and air upon cast and wrought iron, 1838, 253; 1839, 171; 1840, 221; 1843, 1.
—— on the action of heat on inorganic and organic substances, 1838, 313.
——, report on the internal changes in the constitution of metals, 1843, 294.
——, reports on the facts of earthquake phenomena, 1847, 39; 1848, 98; 1850, 1; 1851, 272; 1852, 1; 1853, 117; 1854, 1; 1858, 1.
——, report on seismometers, 1848, 98; 1850, 88; 1854, 370.
——, report on railway-bar corrosion, 1849, 88.
——, report on earthquake wave-transits, and on seismometrical instruments, 1853, 86.
MASKELYNE (Prof.), report on the state of our knowledge regarding the photographic image, 1859, 103.
MEADE (R. H.), typical list of Arachnida for local museums, 1855, 118.
—— on the anatomy of the Araneidea, or true spiders, especially on the internal structure of their spinning organs, 1858, 157.
MELVILLE (Dr.), report on the marine fauna of the S. & W. coasts of Ireland, 1858, 176.
MEYER (Dr. C.) on the importance of the study of the Celtic language as exhibited by the modern Celtic dialects still extant, 1847, 301.
MILES (Rev. Dr.), report on dredging in the Frith of Clyde, 1856, 47.
MILLER (Dr. W. A.) on electro-chemistry, 1857, 158.
MILLER (Prof. W. H.), report on experiments with balloons, 1841, 55.
——, report on the translation and publication of foreign scientific memoirs, 1841, 328; 1842, 210; 1843, 129.
——, report on chemical notation, 1835, 207.
——, report on the crystalline slags, 1846, 351.
MILNE (DAVID), report on registering shocks of earthquakes in Great Britain, 1841, 46; 1842, 92; 1843, 120; 1844, 85.
MILTON (Viscount), address at the First Meeting, 1831–32, 15.
——, address at the Second Meeting, 1831–32, 95.
MOGGRIDGE (M.), table of the registration of periodic phenomena, 1850, 350.
MOORSOM (Admiral), report on the measurement of ships for tonnage, 1857, 62.
——, report on steam-ship performance, 1859, 268; 1860, 193.
—— on the performance of steam-vessels, the functions of the screw, and the relations of its diameter and pitch to the form of the vessel, 1860, 172.
MORPETH (Lord), address at the First Meeting, 1831–32, 43.
MOSELEY (Rev. Prof.), report on a constant indicator for steam-engines, 1841, 307; 1842, 98.
——, report of experiments on steam-engines, 1843, 104; 1844, 90.
MÜLLER (Dr. MAX) on the relation of the Bengali to the Arian and Aboriginal languages of India, 1847, 319.
MURCHISON (Sir R. I.), address at the Newcastle Meeting, 1838, xxxi.
——, address at the Glasgow Meeting, 1840, xxxv.
——, report on coloured drawings of railway sections, 1841, 331; 1842, 38; 1843, 295.
——, address at the Southampton Meeting, 1846, xxvii.
——, memorial on the Ordnance survey of Scotland, 1851, 370.
——, report on the effects produced upon the channels of the Mersey, by the alterations made in its banks, 1855, 143; 1856, 1.
——, report on the upper Silurians of Lesmahago, Lanarkshire, 1859, 63.
MYRTLE (Dr.) on a luminous meteor, 1853, 32.

NAPIER (J. R.), remarks on Mr. Atherton's paper on mercantile steam-transport economy, 1856, 435.
——, report on the measurement of ships for tonnage, 1856, 458; 1857, 62.
——, report on steam-ship performance, 1859, 268; 1860, 193.
NASMYTH (J.), report on the internal changes in the constitution of metals, 1843, 294.
—— on railway-bar corrosion, 1849, 93.
——, report on metals for ordnance, 1855, 100.
NEILSON (J. B.), report on metals for ordnance, 1855, 100.
NICOL (Prof. J.), report on the excavations in Dura Den, 1860, 32.
NILSSON (Prof.) on the primitive inhabitants of Scandinavia, 1847, 31.
NOLAN (Dr. J.), report on the motions and sounds of the heart, 1835, 243; 1836, 275.
NORTHAMPTON (Marquis of), report on the application to Government for a depository for mining records, 1839, 174.
——, relative to application to the Trustees of the British Museum for enlarged exhibitions in illustration of recent and fossil conchology, 1840, 443.
——, report on coloured drawings of railroad sections, 1841, 331; 1842, 38; 1843, 295.
——, letter to Sir R. Peel relative to magnetical and meteorological observations, 1845, 67.

NORTHAMPTON (Marquis of), address at the Meeting at Swansea, 1848, xxxi.

O'BEIRNE (Dr. J.), report on the pathology of the brain and nervous system, 1836, 283.
ODLING (Dr.), report on organic chemistry, 1859, 1.
OGILBY (W.), report on zoological nomenclature, 1842, 105; 1843, 119.
OLDHAM (J.) on the physical features of the Humber, 1853, 36.
——, report on the rise and progress of steam navigation at Hull, 1853, 45; 1857, 57; 1859, 119.
OLDHAM (T.), report on subterranean temperature in Ireland, 1844, 221.
OSLER (A. FOLLETT), report on the observations recorded by the self-registering anemometer at the Philosophical Institution, Birmingham, 1840, 321.
——, report on the erection of his anemometer at Inverness, 1842, 206.
——, account of the self-registering anemometer and rain-gauge at the Liverpool observatory, 1855, 127.
OWEN (Capt. J. O.), report on the measurement of ships for tonnage, 1857, 62.
OWEN (Prof. R.), report on British fossil reptiles, 1839, 43; 1840, 443; 1841, 60.
——, report on the translation and publication of foreign scientific memoirs, 1841, 328; 1842, 210; 1843, 129.
——, report on the British fossil Mammalia, 1842, 54, 74; 1843, 208.
——, report on zoological nomenclature, 1842, 105; 1843, 119.
——, report on the varieties of the human race, 1843, 292; 1844, 93.
——, report on the extinct mammals of Australia, 1844, 223.
——, report on the periodical phenomena of animals and vegetables, 1845, 321; 1850, 338.
——, report on the archetype and homologies of the vertebrate skeleton, 1846, 169.
——, report on typical objects in natural history for local museums, 1855, 108; 1856, 461.
——, address at the Leeds Meeting, 1858, xlix.
——, report on a series of skulls of various tribes of mankind inhabiting Nepal, 1859, 95.
——, on the orders of fossil and recent Reptilia, and their distribution in time, 1859, 153.

PAGE (D.), report on the upper Silurians of Lesmahago, Lanarkshire, 1859, 63.
——, report on the excavations in Dura Den, 1860, 32.
PARIS (Admiral), report on steam-ship performance, 1860, 193.
PATTERSON (R.), report on the marine zoology of Great Britain, 1840, 444; 1841, 331; 1842, 213.
——, report on procuring drawings of the radiate animals of the British Islands, 1840, 444.
——, the freshwater fishes of Ulster, as in the MSS. of the late W. Thompson, 1852, 290.
——, supplementary report on the fauna of Ireland, by the late W. Thompson, 1852, 290.
——, report of the Belfast dredging committee, 1855, 143; 1857, 220; 1858, 282; 1859, 116.
PATTINSON (H. L.), report of some galvanic experiments to determine the existence or non-existence of electrical currents among stratified rocks, 1839, 23.
PATTISON (Mr.), report on registering shocks of earthquakes in Great Britain, 1842, 92; 1843, 120.
PEACH (C. W.) on the habits of the marine Testacea, 1843, 129.
——, report on the registration of the periodic phenomena of plants and animals, 1849, 78.
PEACOCK (Very Rev. Dr. G.), report on certain branches of analysis, 1833, 185.
——, report on the reduction of the Greenwich observations of the moon, 1838, 315.
——, report on simultaneous observations in terrestrial magnetism and meteorology, 1839, 31; 1840, 427; 1841, 38; 1842, 1; 1843, 54; 1844, 143; 1845, 1.
——, address at the Meeting at York, 1844, xxxi.
——, report on the expediency of continuing the Toronto magnetical and meteorological observatory, 1848, 99.
——, report for procuring a continuance of the magnetic and meteorological observatories, 1858, 295.
PEAKE (J.), report on the measurement of ships for tonnage, 1856, 458.
PERCY (Dr. J.), report on the crystalline slags, 1846, 351.
PERRY (J.), report on the measurement of ships for tonnage, 1857, 62.
——, report on shipping statistics, 1858, 239.
PETERSEN (H.), report on the calculation of the Gaussian constants, 1847, 377.
PHILLIPS (Prof.), statement of the arrangements made for the first Meeting at York, 1831–32, 18.
——, report on the quantities of rain falling at different elevations at York, 1835, 171.
——, magnetic observations, 1838, 61, 70, 144.
——, report on subterranean temperature, 1836, 291.
——, report on British belemnites, 1842, 213.

REESE LIBRARY OF THE UNIVERSITY OF CALIFORNIA

PHILLIPS (Prof.), report on zoological nomenclature, 1842, 105; 1843, 119.
—— on magnetical and meteorological observations, 1845, 37.
——, report on anemometry, 1846, 340; further researches, 1848, 97.
——, report on earthquakes and seismometers, 1854, 370.
——, report on the physical character of the moon's surface, as compared with that of the earth, 1853, 84; 1854, 415.
——, report on typical objects in natural history for local museums, 1855, 108; 1856, 461.
——, report on cleavage and foliation in rocks, and on the theoretical explanations of these phenomena, 1856, 369.
—— report on the magnetic survey of Great Britain, 1857, 130; 1858, 185.
PHILLIPS (Prof. M.), report on the internal changes in the constitution of metals, 1843, 294.
PHILLIPS (R.), report on chemical notation, 1835, 207.
PLAAR (Dr. G.) on certain transformations of a series of factorial exponentials, 1857, 101.
PLAYFAIR (Dr. LYON), abstract of Professor Liebig's report on "Organic chemistry applied to physiology and pathology," 1842, 42.
——, report on the gases evolved from iron furnaces, with reference to the theory of smelting of iron, 1845, 142.
POLE (Prof. W.), report of experiments on steam-engines, 1843, 104; 1844, 90.
PORTER (G. R.), report on the vital statistics of large towns in Scotland, 1842, 121.
—— on the progress of savings' banks in the United Kingdom, 1845, 129.
——, report on the progress of the iron manufacture in Great Britain, 1846, 99–119.
PORTLOCK (General), report on registering shocks of earthquakes in Great Britain, 1842, 92; 1843, 120; 1844, 85.
——, report on the marine zoology of Corfu and the Ionian Islands, 1844, 390.
——, report of the Committee on earthquakes, with their proceedings respecting seismometers constructed under the superintendence of Major James, 1854, 370.
POWELL (Rev. Prof.), report on radiant heat, 1831–32, 259; 1840, 1; 1854, 337.
—— on determining the refractive indices for the standard rays of the solar spectrum, 1836, 288.
——, report of experiments on subterranean temperature, 1836, 291.
——, report on our knowledge of refractive indices for the standard rays of the solar spectrum in different media, 1839, 1.
——, reports on observations of luminous meteors, 1848, 1; 1849, 1; 1850, 89; 1851, 1; 1852, 178; 1853, 1; 1854, 386; 1855, 79; 1856, 51; 1857, 131; 1858, 137; 1859, 81.
POWELL (Rev. Prof.), suggestions for the observation of the total eclipse of the sun, 1850, 359.
PRICHARD (Dr. J. C.), on philological and physical researches as applied to the human species, 1831–32, 529.
——, report on the varieties of the human race, 1840, 447; 1841, 52, 332; 1843, 292; 1844, 93.
——, on the various methods of research which contribute to the advancement of ethnology, and of the relations of that science to other branches of knowledge, 1847, 230.
PRINCE CONSORT (His Royal Highness the), address at the Aberdeen Meeting, 1859, lix.
PROUT (Dr.), report on chemical notation, 1835, 207.

QUETELET (A.), on the state of mathematics in Belgium, 1835, 35.
—— on magnetical and meteorological observations, 1845, 31.
——, on observations of the periodical phenomena of animals and vegetables, 1845, 321.

RAMSAY (Prof. A. C.), report on the upper Silurians of Lesmahago, Lanarkshire, 1859, 63.
——, report on the excavations in Dura Den, 1860, 32.
RANKINE (Prof. W. J. M.), on luminous meteors, 1853, 32.
——, report on metals for ordnance, 1855, 100.
——, report on steam-ship performance, 1859, 268; 1860, 193.
READ (Rev. W.), on luminous meteors, 1852, 235.
READE (Rev. J. B.), observations of luminous meteors, 1852, 208; 1854, 394, 412.
REDFIELD (W. C.) on magnetical and meteorological observations, 1845, 65.
REES (Dr. G. O.), report of Committee on the chemical composition of glands and their secretions, 1837, 139, 149.
RENNIE (G.), report on the progress of hydraulics as a branch of engineering, 1833, 153; 1834, 415.
——, report on railway constants, 1838, 197.
——, report upon the changes in the channels of the Mersey, 1855, 143; 1856, 1, 4.
RICHARDSON (Sir J.), report on North American zoology, 1836, 121.
——, report on the ichthyology of New Zealand, 1842, 12.
——, report on zoological nomenclature, 1842, 105; 1843, 119.
——, report on the ichthyology of the seas of China and Japan, 1845, 187.
RIGAUD (Prof.), report on the reduction of

the Greenwich observations of the moon, 1838, 315.
Roberts (R.), report on steam-ship performance, 1860, 193.
Robinson (Rev. Dr.), on the determination of the constant of nutation by the Greenwich observations, 1837, 127.
——, report on the establishment of an observatory at Liverpool, 1838, 316.
——, report on the reduction of the Greenwich observations of the moon, 1838, 315.
——, report on the reduction of the stars in the Histoire Céleste, 1838, 316; 1839, 174; 1840, 426; 1841, 330; 1842, 205.
——, report on the extension of the Royal Astronomical Society's Catalogue of stars (British Association Catalogue of stars), 1838, 316; 1839, 174; 1840, 425; 1841, 330; 1842, 206; 1845, 340.
——, on the determination of the arc of longitude between the observatories of Armagh and Dublin, 1839, 19.
——, report on the translation and publication of foreign scientific memoirs, 1840, 446; 1841, 328; 1842, 210; 1843, 129.
——, report on experiments with balloons, 1841, 55; 1843, 128; 1844, 390.
——, address at the Birmingham Meeting, 1849, xxix.
——, report on the physical character of the moon's surface, as compared with that of the earth, 1853, 84; 1854, 415.
——, report on metals for ordnance, 1855, 100.
——, report on earthquakes and Seismometers, 1854, 370.
——, report for procuring a continuance of the magnetic and meteorological observatories, 1858, 295.
Robison (Sir J.), report on waves, 1837, 417; 1838, 315; 1840, 441; 1841, 325; 1844, 311.
——, report on the form of ships, 1840, 425; 1841, 325; 1842, 104; 1843, 112.
——, report on registering shocks of earthquakes in Great Britain, 1843, 120.
Rogers (Prof. H. D.), report on the geology of North America, 1834, 1.
Roget (Dr.), report on the chemical composition of the glands and their secretions, 1837, 139, 149.
Ronalds (F.), reports on the observatory at Kew, 1844, 120–142; 1845, 341; 1849, 80; 1850, 176; 1851, 335.
——, magnetographs, 1849, 82; 1850, 181; 1851, 350, 358 (*vide* 1843, xxxix; 1848, xvii; 1849, xvi; 1851, xxvii; 1852, xxviii).
Roscoe (Dr. H. E.), photochemical researches, 1856, 62.
Ross (Admiral Sir J. C.), on the direction and intensity of the terrestrial magnetic force in Ireland, 1835, 117.
——, magnetic observations in the British Islands, 1838, 62, 74, 86, 104, 116, 148, 157, 163, 174, 182.
Ross (Admiral Sir J. C.), report on an expedition for tide observations, 1847, 134.
——, report on the magnetic survey of Great Britain, 1857, 130; 1858, 185.
Ross (D.), Leith tide observations, 1841, 33.
Rosse (Earl of), address at the meeting at Cork, 1843, xxix.
——, on the construction of large reflecting telescopes, 1844, 79.
——, on nebulæ observed in the six-feet reflector, 1849, 53.
——, report on the physical character of the moon's surface, as compared with that of the earth, 1853, 84; 1854, 415.
Roupell (Dr.), report on acrid poisons, 1835, 211, 235.
——, report on poisons, 1841, 26.
Royle (Prof.), report on the probable effects of the destruction of tropical forests, 1851, 78.
Russell (J. S.), report on waves, 1837, 417; 1838, 315; 1840, 441; 1841, 325; 1844, 311–390.
——, report on the form of ships, 1840, 425; 1841, 325; 1842, 104; 1843, 112; 1844, 391.
——, report on the tides of the Frith of Forth and the east coast of Scotland, 1843, 110.
——, report on the measurement of ships for tonnage, 1857, 62.
——, report on steam-ship performance, 1859, 268; 1860, 193.
Rutherford (Rev. A.), register of the thermometer and barometer at Kingussie, 1839, 28.

Sabine (General), an abstract of the 'Magnetismus der Erde' of Prof. Ch. Hansteen, 1835, 61.
——, on the direction and intensity of the terrestrial magnetic force in Ireland, 1835, 117.
——, on the direction and intensity of the terrestrial magnetic force in Scotland, 1836, 97.
——, report on the variations of the magnetic intensity observed at different points of the earth's surface, 1837, 1, 497; 1838, 318.
——, memoir on the magnetic isoclinal and isodynamic lines in the British Islands, 1838, 49–196.
——, address at the Glasgow Meeting, 1840, xxxv.
——, reports on simultaneous magnetical and meteorological observations, 1840, 427; 1841, 38; 1842, 1; 1843, 54; 1844, 143; 1845, 1, 53.
——, report on the translation and publication of foreign scientific memoirs, 1840, 446; 1841, 328; 1842, 210; 1843, 129.
——, report for providing meteorological instruments for M. Agassiz and Mr. M'Cord, 1841, 41.

SABINE (General), report on experiments with balloons, 1841, 55; 1843, 128; 1844, 390; 1860, 43.
——, on the remarkable magnetic disturbance at Toronto, &c., 1841, 340.
——, letter from Mr. A. D. Bache on the Magnetic Observatory at Philadelphia, &c., 1842, 208.
——, on the meteorology of Toronto in Canada, 1844, 42.
——, on some points in the meteorology of Bombay, 1845, 73.
——, Prof. Dove's temperature tables, with introductory remarks, 1847, 373.
——, introductory notice to Prof. Dove's remar'ts on his maps of the monthly isothermal lines of the globe, 1848, 85.
——, report on the expediency of continuing the Toronto magnetical and meteorological observatory, 1848, 99.
——, letter from Prof. Henry on the system of meteorological observations proposed to be established in the United States, 1851, 320.
——, report on the Kew magnetographs, 1851, 325.
——, address at the meeting at Belfast, 1852, xli.
——, on some of the results obtained at the British Colonial magnetic observatories, 1854, 355.
——, report on earthquakes and seismometers, 1854, 370.
——, report on the magnetic survey of Great Britain, 1857, 130; 1858, 185.
——, report for procuring a continuance of the magnetic and meteorological observatories, 1858, 295.
——, report on the patent laws, 1858, 164; 1859, 191.
SANDON (Lord), report on the vital statistics of large towns in Scotland, 1842, 121.
SCHÖNBEIN (Prof.), researches in electrochemistry, 1840, 209.
——, report on ozone, 1845, 91.
SCHUNCK (Dr.), report on the colouring matters of madder, 1846, 24; 1847, 136; 1848, 57.
SCLATER (Dr. P. L.), typical list of birds for local museums, 1855, 111.
SCORESBY (Rev. Dr.), report on metals for ordnance, 1855, 100.
SCOWLER (Dr.), report on the varieties of the human race, 1844, 93.
SEDGWICK (Prof.), address at the Cambridge Meeting, 1833, x, xxvii.
——, address at the Edinburgh Meeting, 1834, ix.
——, report on the application to Government for a depository for mining records, 1839, 174.
SELBY (P. J.), report on Anoplura, 1841, 331.
SENFTENBERG (Baron), on the self-registering meteorological instruments employed in the observatory at Senftenberg, 1845, 108.
SHARPEY (Dr.), notice of researches on Asphyxia, 1843, 294.
——, report on the scientific objects to be sought for by continuing balloon ascents, 1860, 43.
SHUCKARD (W. E.), report on zoological nomenclature, 1842, 105.
SIBSON (F.), report on the communication between the arteries and absorbents, 1836, 289.
SIMPSON (J.), results of thermometrical observations made at Point Barrow, 1857, 159.
SLADEN (E. H. M.), table for the registration of periodic phenomena at Ninfield, Sussex, 1850, 356.
SLATTER (Rev. J.), observations of luminous meteors, 1849, 9–24, 43.
SLIMON (R.), exploration of the upper Silurians of Lesmahago, Lanarkshire, 1859, 63.
SMITH (Dr. A.), report on the varieties of the human race, 1843, 292; 1844, 93.
SMITH (A.), on the deviations of the compass in wooden and iron ships, 1854, 434.
SMITH (Prof. H. J. S.), report on the theory of numbers, 1859, 228; 1860, 120.
SMITH (J.), report on the marine zoology of Great Britain, 1840, 444; 1841, 331; 1842, 213.
——, report on the form of ships, 1840, 425; 1841, 325.
SMITH (Dr. R. A.), report on the air and water of towns, 1848, 16; 1851, 66.
SMITH (Capt. R. B.), report on the probable effects of the destruction of tropical forests, 1851, 78.
SMITH (Dr. W.), the Wollaston Medal awarded by the Geological Society, presented to him at Oxford, 1831–32, 99.
SMITH (W.), report on steam-ship performance, 1859, 268; 1860, 193.
SMYTH (Prof. C. Piazzi), on the "Mare Crisium and its shores," 1854, 416.
SMITH (W. W.), list of meteorites which have fallen in Hungary, 1849, 2.
——, on a fall of meteorites at Stannern, in Moravia, 1849, 32.
——, on the presence of phosphorus in meteoric iron, 1849, 33.
——, notice of the meteorite of Braunau, 1849, 32.
SOPWITH (T.), report on the application to Government for a depository for mining records, 1839, 174.
STAFFORD (Marquis of), report on steam-ship performance, 1859, 268; 1860, 193.
STANLEY (Lord), report on the patent laws, 1858, 164.
STEVENSON (Mr.), report on the relative level of land and sea, 1840, 444.
STEWART (B.), on some results of the magnetic survey of Scotland in the years 1857 and 1858, undertaken by the late John Welsh, 1859, 167.
——, account of the construction of the

self-recording magnetographs at the Kew observatory, 1859, 200.
Stokes (Prof. G. G.), report on researches in hydrodynamics, 1846, 1.
——, report on earthquakes and seismometers, 1854, 370.
——, report on the formation of a catalogue of philosophical memoirs, 1856, 463.
Strachey (Capt. R.), report on the probable effects of the destruction of tropical forests, 1851, 78.
Stratford (W. S.), report on the catalogue of stars of the British Association, 1845, 340.
——, report on the completion of the catalogues of Lalande and Lacaille's Stars, 1845, 339; 1847, 379.
Strickland (A.), report on the marine zoology of Britain, 1840, 444; 1841, 331.
——, report on the varieties of the human race, 1843, 292; 1844, 93.
Strickland (Prof. H. E.), report on the growth and vitality of seeds, 1841, 50; 1842, 34; 1843, 105; 1844, 94; 1845, 337; 1846, 20; 1847, 145; 1848, 31; 1849, 78; 1850, 160; 1851, 53; 1852, 177; 1853, 67.
——, report on zoological nomenclature, 1842, 105; 1843, 119.
——, report on the progress of ornithology, 1844, 170–221.
——, report on the periodical phenomena of animals and vegetables, 1845, 321.
Struve (M. Otto), suggestions for the observation of the total eclipse of the sun, 1850, 359.
Sullivan (Prof. W. K.), report on the solubility of salts at temperatures above 100° Cent., and on the mutual action of salts in solution, 1859, 291.
Sykes (Col.), report of experiments on subterranean temperature, 1836, 291.
——, report on the statistics of Dukhun (Deccan), 1837, 217–336.
——, report on the vital statistics of large towns in Scotland, 1842, 121.
——, on the temperature and rain in the Bengal Presidency, 1852, 252.
——, report on experiments with balloons, 1859, 289; 1860, 43.
Sylvester (Prof. J. J.), provisional report on the theory of determinants, 1853, 66.
Symons (G. J.), meteors observed to pass between the respective constellations, 1859, 89.
——, observations of luminous meteors, 1858, 137, 140; 1859, 90.

Taylor (J.), report on the state of knowledge respecting mineral veins, 1833, 1.
——, report on the application to government for a depository for mining records, 1839, 174.
——, report on coloured drawings of railway sections, 1841, 331; 1842, 38; 1843, 295.
Taylor (R.), report on the varieties of the human race, 1840, 447; 1841, 52, 332.
——, report on the registration of the periodic phenomena of plants and animals, 1845, 321; 1849, 78; 1850, 338.
Taylor (Rev. W.), report on the various modes of printing for the blind, 1837, 87.
Thompson (Dr. T.), report on chemical notation, 1835, 207.
Thompson (W.), report on the fauna of Ireland, 1840, 353; 1843, 245; 1852, 290.
——, report on procuring drawings of the radiate animals of the British Islands, 1840, 444.
——, report on the marine zoology of Britain, 1840, 444; 1841, 331; 1842, 213.
——, report on the periodical phenomena of plants and animals, 1845, 321; 1849, 78.
——, on the freshwater fishes of Ulster, 1852, 290.
Thomson (A.), report on the Aberdeen industrial feeding schools, 1859, 44.
Thomson (Prof. J.), on the vortex waterwheel, 1852, 317.
——, report of experiments on the measurement of water by triangular notches in weir boards, 1856, 46; 1858, 181; 1860, 217.
Thomson (Prof. T.), on the composition of cast iron produced by cold and hot blast, 1837, 117.
Thomson (Dr. W.), report on the registration of deaths, 1835, 251.
Thomson (Prof. W.), report on the scientific objects to be sought for by continuing balloon ascents, 1860, 43.
——, report on the construction of a self-recording atmospheric electrometer for Kew Observatory, and portable apparatus for observing atmospheric electricity, 1860, 44.
Thomson (Prof. Wyville), on zoophytes from the north of Ireland, 1857, 235.
——, report of the Belfast dredging committee, 1858, 282; 1859, 116.
Todd (Dr. R. B.), report on the motions and sounds of the heart, 1836, 261; 1837, 155; 1840, 163.
Torrie (J. T.), report on registering shocks of earthquakes in Great Britain, 1843, 120; 1844, 85.
Traill (Dr.), report on the registration of deaths, 1835, 251.
Traill (Prof.), address at the Liverpool Meeting, 1837, xxv.
——, report on the establishment of an observatory at Liverpool, 1838, 316.
Trevelyan (Sir W. C.), report on the registration of the periodic phenomena of plants and animals, 1849, 78.
Turner (Dr.), report on chemical notation, 1835, 207.
Tyndall (Prof.), report on experiments with balloons, 1859, 289.

VIGNOLES (C.), report of Committee on railway sections, 1842, 38.
——, on the adaptation of suspension bridges to sustain the passage of railway trains, 1857, 154; 1858, 293.
VIVIAN (J.), report on the application to Government for a depository for mining records, 1839, 174.
VOELCKER (Dr.), report on field experiments and laboratory researches on the constituents of manures essential to cultivated crops, 1859, 31.

WALKER (Mr.), report on the marine zoology of Britain, 1842, 213.
WALKER (Rev. Prof.), reports on the scientific objects to be sought for by continuing balloon ascents, 1860, 43.
WALLER (E.), report of the Belfast dredging committee, 1858, 282; 1859, 116.
WARD (N.), report on the growth of plants in closed glass vessels, 1837, 502.
WARE (Dr. H.), report on the varieties of the human race, 1843, 292; 1844, 93.
WATERHOUSE (G. R.), report on zoological nomenclature, 1842, 105; 1843, 119.
WATSON (H.), report on engraving skeleton maps for recording the distribution of plants and animals, 1840, 445; 1841, 327.
WATSON (H. H.), report on the internal changes in the constitution of metals, 1843, 294.
WATT and CAVENDISH, Rev. W. Vernon Harcourt on the discoveries of, 1839, 6, *et seq.*
WATTS (J. K.), observations of luminous meteors, 1854, 406; 1857, 136.
WEBB (T. W.), observations of luminous meteors from old diaries, 1852, 178.
WEBER (Prof. Wilhelm), on magnetical and meteorological observations, 1845, 14.
WEBSTER (T.), report on the patent laws, 1858, 164; 1859, 191.
WELSH (J.), report on the performance of Mr. Ronalds's three magnetographs, 1851, 328.
——, hygrometric sliding rule, 1851, 345; sliding rule, 353.
——, magnetic survey of Scotland, 1859, 167.
——, self-recording magnetographs, 1859, 200.
WEST (W.) on apparatus for the detection and measurement of gases present in atmospheric air, 1838, 316; 1839, 171.
WESTWOOD (J. O.), report on zoological nomenclature, 1842, 105; 1843, 119.
WHEATSTONE (Prof.), report on the translation and publication of foreign scientific memoirs, 1840, 446; 1841, 328; 1842, 210; 1843, 129.
——. reports on registering shocks of earthquakes in Great Britain, 1842, 92; 1843, 120; 1844, 85.
——, description of the telegraph thermometer, 1843, 128.
WHEATSTONE (Prof.), report on experiments with balloons, 1843, 128; 1844, 390 1859, 289.
WHEWELL (Rev. Dr.), report on mineralogy, 1831–32, 322.
——, address at the Cambridge Meeting, 1833, xi.
——, report on the progress of the mathematical theories of electricity, magnetism, and heat, 1835, 1.
——, report on chemical notation, 1835, 207.
——, report on a level line, measured from the Bristol Channel to the English Channel, 1838, 1.
——, reports on the discussions of tides. 1838, 19; 1839, 13; 1840, 436–441; 1841, 30, 33.
——, report on simultaneous magnetical and meteorological observations, 1839, 31; 1840, 427; 1841, 38; 1842, 1; 1843, 54; 1844, 143; 1845, 1.
——, report on the nomenclature of the stars, 1839, 172; 1840, 426; 1841, 44; 1843, 292; 1844, 32; appendix, 34.
——, address at the Plymouth Meeting, 1841, xxvii.
——, report on experiments with balloons, 1841, 55; 1843, 128.
——, report on an expedition for tide observations, 1847, 134.
——, report for procuring a continuance of the magnetic and meteorological observatories, 1858, 295.
WHITWORTH (J.), report on metals for ordnance, 1855, 100.
WILDE (Mr.), report on the varieties of the human race, 1844, 93.
WILLIAMS (Dr. C. J. B.), report on the motions and sounds of the heart, 1836, 261; 1837, 155; 1840, 163.
——, report on the physiology of the lungs and air-tubes, 1840, 411.
WILLIAMS (Dr. T.), report on the British Annelida, 1850, 133; 1851, 159.
WILLS (W.), on the meteorology of Birmingham, 1852, 297.
WISEMAN (Dr.), report on the varieties of the human race, 1840, 447; 1841, 52, 332.
WOOD (J.), report on the measurement of ships for tonnage, 1856, 458.
WOODCROFT (Prof. B.), report on the measurement of ships for tonnage, 1857, 62.
WOODS (E.), report on railway constants, 1841, 247.
WOODWARD (S. P.), typical list of mollusca for local museums, 1855, 114.
WOOLLEY (Rev. Dr.), report on the measurement of ships for tonnage, 1857, 62.
WRIGHT (Dr. E. P.), report on the marine fauna of the S. and W. coasts of Ireland, 1858, 176.
——, report of Dublin Bay Dredging Committee, 1858, 262; 1859, 80; 1860, 27.
WRIGHT (H.), report on shipping statistics, 1858, 239.

WRIGHT (H.), report on steam-ship performance, 1859, 268, 1860, 193.
WRIGHT (Dr. T.), on the stratigraphical distribution of the oolitic Echinodermata, 1856, 396.
WROTTESLEY (Lord), report on the expediency of continuing the Toronto magnetical and meteorological observatory, 1848, 99.
——, remarks on a meteor, 1853, 35.
——, report on experiments with balloons, 1859, 289.
——, address at the Meeting at Oxford, 1860, lv.
YARRELL (W.), report on the varieties of the human race, 1840, 447; 1841, 52, 332.
——, report on Anoplura, 1841, 331.
——, report on zoological nomenclature, 1842, 105.
YATES (J.), report on the growth of plants in closed glass vessels, 1837, 501.
——, report on the measurement of ships for tonnage, 1857, 62.
——, report on the varieties of the human race, 1840, 447; 1841, 52, 332.
YATES (J. B.), report upon the changes in the channels of the Mersey, 1855, 143; 1856, 1.

REPORTS, &c.

INDEX OF SUBJECTS.

Aberdeen Standard Scale, F. Baily on the comparative measurement of the, 1835, 91.
Aberrantia (Amphipoda), British, C. Spence Bate on the, 1855, 18.
——, British, list of, 1860, 224.
Absorbents and Arteries, report of the Committee on the communication between, by Dr. Hodgkin, 1836, 289.
Abyssinian languages, on the, 1847, 223.
Acalephæ, Rev. L. Jenyns on the state of our knowledge of the, 1834, 232.
——, Irish, 1843, 281; 1852, 296; British, 1860, 232–234.
——, Mediterranean and Ægean, Prof. E. Forbes on the, 1843, 146.
Acanthocephala, British, 1860, 229.
——, Irish, W. Thompson on the, 1843, 277; 1852, 295.
Acanthodes, fossil, Prof. Agassiz on, 1842, 80; 1843, 194, 197.
Acanthopterygii of North America, 1836, 204; of Ireland, 1840, 384; 1852, 291; of New Zealand, 1842, 15; British, 1844, 302; of the seas of China and Japan, 1845, 204.
——, fossil, 1843, 205, 207; of the London Clay, Prof. Agassiz on the, 1844, 289, 307.
Acanthuridæ of North America, Sir J. Richardson on the, 1836, 207, 211.
—— of the China and Japan Seas, Sir J. Richardson on the, 1845, 243.
Acephala, British, 1850, 205, 229; 1860, 220; South European, 1850, 264; Ægean, 1843, 142; of the West Coast of North America, 1856, 298; Irish, 1843, 259; 1857, 225; of the North-east Atlantic, 1856, 102, 137.
——, Dr. Carpenter on the enlargement of the shells of, 1847, 97.
Acetate of lead and sulphate of magnesia,—or sulphate of soda,—or sulphate of zinc,—or sulphuric acid,—or oxalic acid, Dr. T. Andrews on the heat of combinations of, 1849, 73, 74.
Acid principles, list of, by Prof. Johnston, 1831–32, 528.
——, acetic, 1831–32, 504; 1859, 4, 8; in springs, 1836, 29.
——, alizaric, 1847, 140; 1848, 64.
——, anhydrous sulphuric, 1831–32, 462.
Acid, apocrenic, in springs, 1836, 30.
——, arsenic and arsenious, their action when injected into the veins, 1843, 118.
——, benzoic, 1831–32, 502; 1859, 7.
——, boracic, in thermal springs, 1836, 27.
——, bromic, its action when injected into the veins, 1845, 83.
——, carbonic, evolved from springs, 1836, 36, 71.
——, carbonic, its effects when thrown into the veins and carotid artery, 1841, 28.
——, carbonic, its action on the growth of plants, 1848, 84, 97; 1849, 56; 1850, 159.
——, chloric, its action when injected into the veins, 1845, 83.
——, chlorous, 1831–32, 462.
——, chlorovinic and chlorovinous, 1831–32, 519.
——, chloroxalic, 1831–32, 505.
——, crenic, in springs, 1836, 30.
——, elardic, 1831–32, 505.
——, erythric, 1831–32, 525.
——, fluoric, in mineral waters, 1836, 19.
——, formic, in springs, 1836, 29.
——, gallic, 1831–32, 503.
——, hydrochloric, its action when injected into the veins, 1845, 84.
——, hyposulphurous, 1831–32, 461.
——, iodic, 1831–32, 466; its effects when injected into the veins, 1845, 83.
——, lactic, 1831–32, 525; 1859, 5.
——, metaphosphoric, 1831–32, 458.
——, muriatic, in springs connected with volcanos, 1836, 27.
——, nitric, action of sulphuretted hydrogen on, 1831–32, 460.
——, nitric, in springs, 1836, 28.
——, nitric, solution of metals in, Dr. T. Andrews on the, 1849, 74.
——, oxalic, and acetate of barytes, or acetate of lead, heat of combination of, 1849, 74.
——, oxalic, and acetate of lead, heat of combination of, 1849, 74.
——, palmic, 1831–32, 505.
——, paratartaric, 1831–32, 500.
——, pectic, 1847, 143.
——, perchloric, 1831–32, 466.
——, phosphoric, 1831–32, 457; in mine-

ral waters, 1836, 19; its action when injected into the veins, 1843, 119.
Acid, purpuric, 1831–32, 525.
——, pyro-alizaric, 1848, 66.
——, pyroracemic, pyroparatartaric, 1831–32, 501.
——, pyrotartaric, 1831–32, 501.
——, rubiacic, 1847, 142; 1848, 66.
——, salicylic, 1859, 5.
——, selenic, its action when introduced into the blood, 1846, 28.
——, sulphuric, in springs connected with volcanos, 1836, 27; its action when introduced into the blood, 1846, 30.
——, sulphuric, anhydrous, mode of preparing, 1831–32, 462.
——, sulphuric, on the specific gravity of, at different degrees of dilution, 1847, 1.
——, sulphuric, with water, heat of combination of, 1849, 67.
——, sulphuric, and nitrate of barytes, heat of combination of, 1849, 74.
——, sulphuric, and chloride of barium, heat of combination of, 1849, 74.
——, sulphuric, and acetate of barytes, heat of combination of, 1849, 74.
——, sulphuric, and acetate of lead, heat of combination of, 1849, 74.
——, sulphuric, and nitrate of lead, heat of combination of, 1849, 74.
——, sulphuric, chlorohydrated, 1859, 5.
——, tartaric, 1831–32, 500.
——, telluric, 1831–32, 473.
——, tellurous, 1831–32, 472.
——, uric, 1831–32, 524.
——, vanadic, 1831–32, 469.
Acids, Dr. Daubeny on the nomenclature of the, 1851, 127.
——, bibasic, 1859, 14.
——, vegetable, Prof. Johnston on, 1831–32, 498, 500; list of, 506.
—— and bases, Dr. T. Andrews on the heat of combination of, 1849, 68.
Acra language, 1847, 169.
Actinograph, report on the, by R. Hunt, 1845, 90; 1846, 31.
Actinometers, on, 1840, 61.
Actinozoa, British, list of, compiled by R. M'Andrew, 1860, 233:—Zoantharia, 233; Alcyonaria, Ctenophora, 234.
——, Irish, 1858, 180.
Adampi, Tambi, and Tembu languages, 1847, 170.
Ægilops, experiments with, by Prof. J. Buckman, 1857, 208; 1860, 35.
Æolidæ of the Ægean Sea, 1843, 133; Irish, 1843, 250; 1852, 292; West Coast of North America, 1856, 313; British, 1860, 220.
Æpinian and Coulombian theories of electricity and magnetism, Rev. Dr. Whewell on the, 1835, 2, 11.
Aerial shadows, Prof. J. D. Forbes on, 1840, 124, 137.
Aërolites, Prof. Powell and others on, 1849, 2, 32, 34, 35; 1850, 89, 118, 119, 120, 122, 123, 125, 127; 1851, 43, 46, 47; 1852, 239; 1855, 94; 1857, 133, 140, 149, 150; 1858, 152; 1859, 93, 94; 1860, 22.
Aërolites and Bolides, catalogue of, by R. P. Greg, 1860, 50.
Æthiopic languages, 1847, 204.
African languages, Dr. Latham on the, 1847, 154.
Agow languages, 1847, 205, 209.
Agricultural College, Royal, Cirencester, on the growth of plants in the garden of the, 1857, 200; 1859, 22; 1860, 34.
Agriculture in Dukhun, Col. Sykes on, 1837, 240, 272, 274.
——, some remarks on, by Dr. Lindley, 1833, 56.
——, Dr. A. Voelcker on the constituents of manures essential to cultivated crops, 1859, 31.
Air, Cavendish's experiments on, 1839, 67.
——, factitious, Cavendish's experiments on, 1839, 58.
—— in cylindrical tubes of finite length, Rev. Prof. Challis on the theory of musical vibrations of the, 1833, 140.
——, resistance of, Rev. Prof. Challis on the theory of the, 1833, 149; 1836, 251.
——, resistance of, Prof. E. Hodgkinson on the mode of conducting experiments on the, 1842, 211.
——, lunar influence on the temperature of the, by J. Park Harrison, 1857, 248; 1859, 193.
—— and water, their action upon cast iron, wrought iron, and steel, 1838, 253; 1840, 221; 1843, 1.
—— and water of towns, Dr. R. A. Smith on the variations in composition of the, 1848, 16; on the action of porous strata, water, and organic matter, 1851, 66.
Air-tubes and lungs, Dr. C. J. B. Williams on the physiology of the, 1840, 411.
Albumen, Prof. Johnston on, 1831–32, 523.
Alcidæ of North America, 1836, 184; of Ireland, 1840, 380; 1852, 291.
Alcohols, Dr. Daubeny on the, 1851, 129; G. C. Foster and Dr. Odling on the, 1859, 12.
Alcyonaria, British, 1860, 234.
Alcyonella, Prof. Allman on the polyzoon, 1850, 305, 328.
Aldehydes, Dr. Daubeny on the nomenclature of the, 1851, 129.
Algebra, report on the progress of certain branches of analysis, by Rev. Dr. Peacock, 1833, 185.
——, report on the progress of analysis (theory of the comparison of transcendentals), by R. L. Ellis, 1846, 34.
——, Prof. H. J. S. Smith on the theory of numbers, 1859, 228; 1860, 120.
Algebraic couple, Dr. C. J. Hargreave on the, 1857, 184:—
On the geometrical interpretation of the algebraic couple, 185.
On infinite angles, and on the principle of mean values, 188.

Algebraical transcendents, researches into the properties of, by R. L. Ellis, 1846, 43.
Alizaric acid, Dr. Schunck on, 1847, 140; 1848, 64.
Alizarin, a colouring matter, Dr. Schunck on, 1846, 25; 1847, 136, 138: 1848, 57, 61, 71.
Alkalies, vegetable, Prof. Johnston on the, 1831–32, 499, 508; list of, 510.
——, vegetable, Dr. Daubeny on the nomenclature of the, 1851, 127.
Alkaline and indifferent principles, list of, by Prof. Johnston, 1831–32, 528.
Alluvial deposits of North America, Prof. H. D. Rogers on, 1834, 8; alluvial terraces, 10; ancient alluvium, 18.
Alphabetical writing, Rev. Dr. Donaldson on, 1851, 151.
Alpha-resin, as a colouring matter, Dr. Schunck on, 1848, 57, 67.
Alpine plants of Scotland, 1836, 258.
Alum slate, Scandinavian, Prof. G. Forchhammer on the metamorphosis of the, 1844, 155.
Ammolin, Prof. Johnston on, 1831–32, 526.
Ammonia and potash, Prof. Johnston on the isomorphism of, 1831–32, 431.
—— in springs, Dr. Daubeny on, 1836, 28.
—— obtained from iron-furnaces, Prof. Bunsen and Dr. Lyon Playfair on, 1845, 180.
——, sulphate of, and chloride of barium, Dr. T. Andrews on the heat of combination of, 1849, 72.
Amorphozoa of the Ægean Sea, 1843, 152; Irish, 1843, 286; 1852, 296; 1857, 112; British, 1850, 246; list of, 1860, 235.
Ampelidæ of North America, 1836, 172; of Ireland, 1840, 368.
Amphibia, North American, Sir J. Richardson on the, 1836, 148, 201.
——, Irish, W. Thompson on the, 1840, 384, 406.
Amphipoda, Irish, W. Thompson on the, 1843, 268; 1852, 294.
——, British, C. Spence Bate on the, 1855, 18, 57.
——, British, list of, 1860, 223.
Amphisbæniæ, American, 1836, 200.
Amphitherium, fossil, British, Prof. Owen on, 1842, 57.
Amphitritæ, Dr. T. Williams on the, 1851, 168, 193, 207, 225, 229.
Ampullaria, structure of the shell of the, 1847, 109, 112.
Anabantidæ of the China Seas, Sir J. Richardson on the, 1845, 250.
Analcime (mineral), Prof. Johnston on, 1837, 192.
Analysis, Rev. Dr. Peacock's report on the progress of certain branches of, 1833, 185–352:—
Algebra, 185; elementary works, 282.
Trigonometry, 288.
Theory of equations:—
Composition of equations, 296.
General solution of equations, 305.
On the solution of numerical equations, 322; errata, 352.
Analysis (theory of the comparison of transcendentals), report on the progress of, by R. L. Ellis, 1846, 34; list of papers connected with the subject, 84.
Anatidæ of North America, 1836, 183; of Dukhun, 1837, 251; Irish, 1840, 377, 378, 379; 1852, 291.
Anatina, structure of the shell in the, Dr. W. B. Carpenter on the, 1844, 10; 1847, 103, 131.
Anatomy of birds, Prof. H. E. Strickland on the, 1844, 204.
—— of the Amphipoda, C. Spence Bate on the, 1855, 18.
—— of the Annelida, Dr. T. Williams on the, 1851, 167.
—— of the Araneidea, on the, 1844, 62; 1858, 157.
—— of the Polyzoa, 1850, 307.
——, on the nomenclature of, by Prof. Owen, 1846, 169.
——, on the archetype and homologies of the vertebrate skeleton, by Prof. Owen, 1846, 169.
——, pathological, on the effects of acrid poisons on the mucous membrane, 1835, 211, 235.
——, vegetable, Dr. Lindley on, 1833, 27.
Anemometer, Prof. J. D. Forbes on the, 1831–32, 247; 1840, 103.
——, Osler's, at Plymouth, report on, by Sir W. S. Harris, 1844, 241.
——, self-registering, A. F. Osler's report on the observations recorded at Birmingham by the, 1840, 321.
——, Osler's, at Inverness, report on, by Sir D. Brewster, 1841, 329; 1842, 206.
——, Osler's, report on the action of, at Edinburgh, by Prof. J. D. Forbes, 1840, 435.
——, Osler's, description of, 1844, 253; 1846, 343.
—— and rain-gauge at the Liverpool Observatory, account of the, with a summary of the records, by A. F. Osler, 1855, 127.
——, Whewell's, tables &c. of observations made with, at Mount Wise, Devonport, by Sir W. Snow Harris, 1838, 28.
——, Whewell's, report on the working of, at Plymouth, by Sir W. Snow Harris, 1840, 157; 1841, 36; 1844, 241.
——, Whewell's, description of, 1844, 242.
——, Rev. W. Foster's, Sir W. Snow Harris on, 1844, 250.
——, self-recording, description of a, by R. Beckley, 1858, 306.
Anemometers of the Kew Observatory, 1844, 129, 142; 1851, 341, 368; 1855, xxx; 1856, xxxi; 1858, 306.
Anemometry, Professor Phillips on, 1846, 340:—
Mechanical effects of the movement of the atmosphere, 1846, 340.

Molecular effects of the movement of the atmosphere, 346.
Anemometry, further researches on, by Prof. Phillips, 1848, 97.
Angles, infinite, Dr. C. J. Hargreave on, and on the principle of mean values, 1857, 188.
Anguillidæ, Irish, 1840, 395; British, 1844, 302.
—— of the China and Japan Seas, Sir J. Richardson on, 1845, 312.
—— of North America, 1836, 219.
—— of New Zealand, Sir J. Richardson on, 1842, 28.
——, of the London Clay, Prof. Agassiz on, 1844, 294, 308.
Animal chemistry, Prof. Johnston on, 1831–32, 521.
—— economy, Liebig's examination of the processes employed in the nutrition and reproduction of the, 1842, 42.
—— kingdom, lists of the, for observing the periodic phenomena of, 1845, 329, 334; 1850, 341.
—— kingdom, Rev. L. Jenyns on the primary types of form and other leading divisions in the, 1834, 149; on the several classes in the, 159.
—— kingdom, scheme to exhibit the equivalent classes and subclasses of the, for local museums, by Prof. Huxley, 1855, 126.
—— matters, solid, directions for the analysis of, by Dr. G. O. Rees, 1837, 153.
—— and vegetable substances, report of the Committee on the preservation of, by Rev. Prof. Henslow, 1840, 421; 1842, 40.
—— and vegetable products imported into Liverpool, Prof. T. C. Archer's report on, 1857, 254.
——, vegetable, and mineral products imported into the Clyde, report by M. Connal and W. Keddie on the, 1858, 185.
Animals, report of Committee on the registration of periodical phenomena of, 1845, 321; 1849, 78; 1850, 338–357.
——, J. Blake on the action of isomorphous substances on, 1843, 115; 1845, 82; 1846, 27.
——, on skeleton maps for recording the distribution of, 1840, 445; 1841, 327.
——, J. B. Lawes and Dr. J. H. Gilbert on the composition of foods in relation to respiration and the feeding of, 1852, 323; 1854, 421.
——, list of, for observing the periodical phenomena of, 1845, 329, 334; 1850, 341.
——, *vide* Mammalia, &c.
Animin, Prof. Johnston on, 1831–32, 526.
Annelida, Rev. L. Jenyns on the state of knowledge respecting the, 1834, 187.
——, Irish, 1843, 271; 1852, 295.
——, British, report on the, by Dr. T. Williams, 1850, 133; 1851, 159:—
Historical Introduction.
Nomenclature, 162.
Zoological position of the class, 162.
Anatomy of the Annelida, 167.
The circulating fluids, 168.
Blood-proper, 174.
Circulating system, 176.
Integumentary system, 190.
Branchial processes, 192.
Locomotive and tactile appendages, 203.
Alimentary system, 219.
Reproductive system, 246.
Senses, instinctive actions, and nervous system, 266.
Annelida, British, with localities, Prof. E. Forbes on, 1850, 244.
——, British, list compiled by R. M'Andrew, 1860, 226:—Turbellaria, 226; Bdellomorpha, Bdellidea, Scolices, Gymnocopa, Chætopoda, 227.
——, fossil, of the Upper Silurians, 1859, 64.
Annulosa, on the state of knowledge respecting the, by Rev. L. Jenyns, 1834, 184. (*Vide* Annelida, Crustacea, Arachnida, Myriapoda, Insecta.)
Anomia, Dr. Carpenter on the microscopic structure of the shell of, 1844, 19; 1847, 95.
Anomodontia, fossil, Prof. Owen on the, 1859, 161.
Anomoura, Irish, 1843, 267; 1852, 293; 1857, 112; 1858, 265; 1859, 81.
——, British, 1850, 243; 1860, 223.
Anoplotherium, fossil, British, Prof. Owen on the, 1843, 225.
Anoplura Britanniæ, statement on Mr. Denny's researches on the, 1841, 331.
—— exotic, report on the investigation of, by H. Denny, 1844, 392.
Antarctic expedition, magnetic observations and results of the, 1842, 1; 1843, 54; 1844, 143.
Antelopes, Prof. A. Jacob on the infra-orbital cavities in, 1835, 208.
Anthozoa, typical list of, for local museums, 1855, 121.
Antimony, tartrate of, J. Blake on its effects when injected into the veins, 1845, 83.
Aphroditaceæ, Dr. T. Williams on the, 1851, 217, 236.
Apiocrinidæ, oolitic, Dr. T. Wright on the, 1856, 403.
Aplysiadæ of the Ægean Sea, 1843, 134, 187; Irish, 1843, 251; 1852, 292; British, 1860, 220.
Apocrenic acid, in springs, Dr. Daubeny on, 1836, 30.
Apoda, Irish, 1843, 271; 1852, 295; British, 1850, 244; 1860, 227.
Apodes (Pisces), Irish, 1840, 395; British, 1844, 302; of North America, 1836, 219; of New Zealand, 1842, 28; of the China and Japan Seas, 1845, 312.
Apophyllite, Prof. Johnston on, 1837, 192.

Arabine (gum), analysis of, 1831–32, 511.
Arachnida, Rev. L. Jenyns on the state of our knowledge of the, 1834, 200.
—— of Dukhun, 1837, 253.
——, Irish, 1843, 270.
——, list of, for local museums, 1855, 118.
——, British, list of, compiled by R. M'Andrew, 1860, 226.
Arachnodermata of the Ægean Sea, Prof. E. Forbes on the, 1843, 146.
Araneidea, report on the structure, functions, and economy of the, by J. Blackwall, 1844, 62.
——, R. H. Meade on some points in the anatomy of the, especially on the structure of their spinning organs, 1858, 157.
Arcaceæ, Dr. Carpenter on the microscopic structure of the shells of, 1847, 101, 131.
—— of the Ægean Sea, 1843, 144, 192; Irish, 1843, 260; 1852, 293; 1857, 105; South European, 1850, 265; British, 1850, 209, 236; 1860, 221; West coast of N. America, 1856, 310; North-east Atlantic, &c., 1856, 142.
Archetype and homologies of the Vertebrate skeleton, Prof. Owen on the, 1846, 169.
Arctic regions, temperature of the, 1831–32, 216.
Ardeidæ, North American, 1836, 182; of Dukhun, 1837, 250; of Ireland, 1840, 374.
Arenicola, Dr. T. Williams on the, 1851, 171, 174, 177, 186, 188, 195, 227, 248.
Arian and aboriginal languages of India, Dr. Max Müller on the relation of the Bengali to the, 1847, 319.
Ariciadæ, Dr. T. Williams on the, 1851, 199, 216, 235.
——, British, 1860, 228.
Aristotle on earthquakes, 1850, 3, 83.
Arragonite, 1831–32, 480.
Arsenic, experiments on, by Cavendish, 1839, 50.
——, J. Blake on the physiological action of, 1843, 118.
——, on cases of poisoning by, 1835, 225, 235.
Art, pictorial, applied to ornithology, Prof. H. E. Strickland on, 1844, 201.
Arteries and absorbents, report of the London Committee on the communication between the, by Dr. Hodgkin, 1836, 289.
Artery, carotid, Dr. G. L. Roupell on the effects of carbonic acid when thrown into the, 1841, 28.
Artesian wells, on the supply of water from, by J. F. Bateman, 1855, 69.
Artillery, provisional report on the properties of metals, and effects of various modes of treating them which are of importance to the durability and efficiency of, 1855, 100.
Ascidia of the Ægean Sea, 1843, 146; Irish, 1843, 264; 1852, 292; 1857, 105, 111; British, 1850, 241; list of, 1860, 222.
Ashantee language, 1847, 169.
Asiatic and African ethnology, on the results of the Egyptian researches in reference to, 1847, 254.
Asphyxia, notice of researches on, 1843, 294.
Astarte, Ægean, Prof. Forbes on the, 1843, 144, 192.
Asteroidea of the Ægean Sea; 1843, 148, 150; Irish, 1843, 279; 1852, 296; British, 1860, 230.
——, oolitic, Dr. T. Wright on the, 1856, 402.
Astronomical Society's catalogue of stars (British Association Catalogue), reports on the extension of, 1838, 316; 1839, 174; 1840, 425; 1841, 330; 1842, 206; 1845, 340.
Astronomy, Prof. Airy's report on the progress of, 1831–32, 125:—
1. A short general history of institutions and periodical publications, 126.
2. An account of some of the instruments principally in use, 131.
3. A statement of the improvements in the catalogues of fundamental stars, including the discussions of the various corrections, 135.
4. An account of the more extended star catalogues, with the tables for facilitating the corrections, 143.
5. Notices upon the measures of double stars, the observations of nebulæ, &c., 146.
6. An account of the principal observations, tables, &c. of the sun and moon, the old planets and their satellites, 149.
7. History of the new planets and periodical comets; and of comets generally, 156.
8. Account of measures whose object is to determine the figure of the earth, 165.
9. General history of physical theories, 169.
10. Comparison of the progress of Astronomy in England with that in other countries, 180.
11. Suggestion of points to which it seems desirable that the attention of astronomers should be directed, 186.
—— in Belgium, M. Quetelet on, 1835, 57.
——, *vide* Stars, &c.
Atherinidæ of North America, Sir J. Richardson on the, 1836, 207, 211.
Atmosphere, Prof. J. D. Forbes on the constitution of the, 1831–32, 206.
——, Rev. Prof. Challis on the mechanical theory of the, 1836, 226.
——, W. West on apparatus for the detection and measurement of gases in the, 1838, 316; 1839, 171.
——, Prof. J. D. Forbes on the distribution of vapour in the, 1840, 101.
——, report on experiments with balloons for ascertaining the condition of the upper

strata of the, 1841, 55; 1843, 128; 1844, 390; 1859, 289; 1860, 43.
Atmosphere, Prof. J. Phillips on the mechanical effects of the movements of the, 1846, 340; molecular effects of the movement of the, 346.
——, Prof. Schönbein on the part which ozone acts in the, 1845, 98.
Atmospheric air, moist, on the phenomenon which phosphorus exhibits when placed in, by Prof. Schönbein, 1845, 97, 100.
—— electricity, Prof. J. D. Forbes on, 1831–32, 252; 1840, 116.
—— electricity, experiments on induction, &c. by, at the Kew Observatory, 1844, 140.
—— electricity, experiments on frequency of, at the Kew Observatory, 1844, 141; 1850, 177, 179; 1851, 354.
—— electricity, report on the discussion of observations made at the Kew Observatory, by W. R. Birt, 1849, 113.
—— electricity, report of Committee for a self-recording atmospheric electrometer for Kew, and on portable apparatus for observing, 1860, 44.
—— phenomena and precipitations, Prof. J. D. Forbes on, 1831–32, 246; 1840, 102.
—— pressure, Prof. J. D. Forbes on, 1831–32, 225; 1840, 85.
—— temperature, Prof. J. D. Forbes on, 1831–32, 210; 1840, 50.
—— waves, Prof. J. D. Forbes's remarks on, 1831–32, 235.
—— waves, Sir J. F. W. Herschel on, 1843, 60, 98.
—— waves, reports by W. R. Birt on, 1844, 267; 1845, 112; 1846, 119, 372; 1847, 351; 1848, 35.
Atomic theory, a brief view of, in regard to certain points connected with the, by Prof. Johnston, 1831–32, 415.
—— weights multiples of that of hydrogen, Prof. Johnston on, 1831–32, 416.
—— weights and specific gravities, relation between, 1831–32, 416.
—— weights, Gerhardt's, on, 1859, 20.
Atropin, Hyoscyamin, Prof. Johnston on, 1831–32, 509.
Attraction, capillary, Rev. Prof. Challis's report on the theory of, 1834, 253; 1836, 249.
Augite and hornblende, on, 1831–32, 486.
Auriculadæ, Irish, 1843, 253; of the North-east Atlantic, 1856, 116, 145; of the West Coast of North America, 1856, 315.
Aurochs, fossil, British, Prof. Owen on the, 1843, 232.
Aurora borealis, Prof. J. D. Forbes on the, 1831–32, 254; 1840, 120.
——, notes on the appearance of an, 1839, 29.
Avena fatua, experiments on the growth of, by Prof. J. Buckman, 1857, 206.
Avicula, Dr. Carpenter on the microscopic structure of the shells of, 1844, 20.
Aviculadæ, Irish, 1843, 260; of the West Coast of North America, 1856, 249; British, 1860, 221.

Balænidæ, Irish, W. Thompson on the, 1840, 363.
Balistidæ of the China Seas, Sir J. Richardson on the, 1845, 200, 318.
Balloons, report on experiments with, for ascertaining the condition of the upper strata of the atmosphere, 1841, 55; 1843, 128; 1844, 390; 1859, 289; 1860, 43.
Barium, chloride of, and sulphate of magnesia,—or sulphate of soda,—or sulphate of zinc,—or protosulphate of iron,—or sulphate of copper,—or sulplate of ammonia, Dr. T. Andrews on the heat of combinations of, 1849, 71, 72.
Barker's water-mill, J. Glynn on, 1847, 148.
Barley, experiments on the growth of, by Prof. J. Buckman, 1857, 206.
Barometer, Prof. J. D. Forbes on the mean height of the, 1840, 88.
—— for use in a balloon, on the, 1841, 58.
——, on the oscillations of the, by W. R. Birt, 1846, 132.
——, photo-registering, at Kew Observatory, 1848, xviii.
——, examples of falls of the, preceding earthquakes, R. Mallet on, 1850, 69.
Barometers of the Kew Observatory, 1844, 127; 1848, xviii; 1851, 346, 367; 1852, xxviii; 1854, xxviii; 1855, xix; 1856, xix.
——, Prof. J. D. Forbes on, 1831–32, 225; 1840, 85.
Barometograph, photo-, at the Kew Observatory, description of the, 1851, 346.
Barometric oscillations, Prof. J. D. Forbes on, 1831–32, 229; 1840, 90.
—— variation with height, Prof. J. D. Forbes on, 1831–32, 236; 1840, 92.
—— observations, discussion of Mr. Brown's, by W. R. Birt, 1846, 140.
Barytes, acetate of, and sulphuric acid, or oxalic acid, Dr. T. Andrews on the heat of combinations of, 1849, 74.
—— and strontian, separation of, 1831–32, 475.
——, nitrate of, and sulphate of magnesia,—or sulphate of soda,—or sulphate of zinc,—or sulphate of copper,—or sulphuric acid, Dr. T. Andrews on the heat of combinations of, 1849, 73, 74.
—— in mineral waters, Dr. Daubeny on, 1836, 16.
——, hyposulphite of, Prof. Johnston on, 1831–32, 481.
Basalt of Dukhun, on the, 1837, 223.
Bases and acids, heat of combination of, 1849, 68.
Bassorine (gum), analysis of, 1831–32, 511.
Batrachia, fossil, Prof. Owen on, 1841, 181; 1859, 166.
Batrachoideæ (Acanthopterygii) of North America, Sir J. Richardson on the, 1836, 207, 212.
Bats of North America, 1836, 138; of Duk-

hun, 1837, 246; of Ireland, 1840, 358; 1852, 291.
Beams, Prof. E. Hodgkinson on impact upon, 1835, 93.
Bears of North America, Sir J. Richardson on the, 1836, 142.
Bees-wax, analysis of, 1831–32, 512.
Begharmi language, 1847, 182.
Belemnites, British, notice relative to, by Prof. Phillips, 1842, 213.
Bengal river-boats, A. Henderson on, 1858, 272.
Bengali, on the relation of the, to the Arian and aboriginal languages of India, by Dr. Max Müller, 1847, 319.
Benzamide, Prof. Johnston on, 1831–32, 503.
——, G. C. Foster and Dr. Odling on, 1859, 5, 7.
Benzoic acid and benzule, Prof. Johnston on, 1831–32, 502.
Berber languages, on the, 1847, 210.
Bergoo or Mobba language, 1847, 183.
Berthon's collapsing boat, A. Henderson on, 1857, 325.
Berycidæ of the China and Japan Seas, Sir J. Richardson on the, 1845, 222.
Beta-resin, Dr. E. Schunck on, 1848, 57, 68.
Biela's comet, 1831–32, 163, 188.
Bichlorine ether, 1831–32, 519.
Bile, Prof. Johnston on, 1831–32, 523.
——, on the formation of, 1842, 50.
Birds, Rev. L. Jenyns on the state of knowledge respecting, 1834, 167.
—— of Dukhun, Col. Sykes on the, 1837, 248.
—— of North America, Sir J. Richardson on the, 1836, 164.
—— of Ireland, W. Thompson on the, 1840, 364, 401; 1852, 291.
——, Prof. Strickland's report on the progress of Ornithology, 1844, 170.
——, on the registration of the periodical phenomena of, 1845, 330; list for, 334; 1850, 341.
——, anatomy and physiology of, Prof. H. E. Strickland on the, 1844, 204.
——, Prof. Owen on the cranium of, 1846, 189, *et seq.*
——, list of, for local museums, by Dr. P. L. Sclater, 1855, 111.
——, *vide* Ornithology.
Births and baptisms in large towns of Scotland, 1842, 146.
Bisharye language, 1847, 204.
Bismuth, expansion of, on becoming solid, 1831–32, 478.
——, oxide of, 1831–32, 478.
Blast furnaces at the Ystalyfera iron-works, J. P. Budd on the advantageous use made of the gaseous escape from the, 1848, 75.
Blenniidæ of the China and Japan Seas, Sir J. Richardson on the, 1845, 265.
——, of the London Clay, Prof. Agassiz on, 1844, 291, 308.
Blind, report by Rev. W. Taylor on the modes of printing for the use of the, 1837, 87.
Blood, analysis of, globuline, hematosine, colour of, manganese in, volatile principle in, 1831–32, 522.
——, Prof. W. Clark on the, 1834, 116; the corpuscles, 117; structure, 118; the lymph, fibrin, serum, 120; gas, 123; the powers which circulate it, 129.
——, on the physiological action of various substances introduced into the, by J. Blake, 1843, 115; 1845, 82; 1846, 27.
Boat, collapsing, Berthon's, 1857, 325.
Boats, life-, Major-General Chesney on the construction and general use of efficient, 1854, 327.
——, life and fishing, A. Henderson's report on the statistics of, on the coasts of the United Kingdom, 1857, 308.
—— of Bengal, A. Henderson on the, 1858, 272.
Boiler-engineering, W. Fairbairn on the resistance of tubes to collapse, 1857, 215; on the collapse of glass globes and cylinders, 1858, 174.
Boiler plate, W. Fairbairn on the tensile strength of, at various temperatures, 1856, 405.
Boiler, stationary, improved, W. Fairbairn on, 1844, 115.
Boilers and furnaces, W. Fairbairn on the forms of, for the consumption of fuel and the prevention of smoke, 1844, 103.
——, locomotive, W. Fairbairn on the strength of, and the causes which lead to explosion, 1853, 53.
Bones, cranial, Prof. Owen on the, 1846, 169.
Boracic acid in thermal springs, Dr. Daubeny on, 1836, 27.
Borlasiæ, Dr. T. Williams on the, 1851, 171, 177, 189, 243.
Bornu language, 1847, 184.
Bos primigenius, Prof. Owen on, 1843, 232; B. longifrons, 235.
Botanical Garden of the Royal Agricultural College, Cirencester, experiments on the growth of plants in, by Prof. Buckman, 1857, 200; 1859, 22; 1860, 34.
Botany, report on the philosophy of, by Dr. Lindley, 1833, 27–57:—
Elementary organs, 27.
Circulation, 32.
Structure of the axis, 33.
Arrangement of leaves, 40.
Structure of leaves, 41.
Anther, &c., 43.
Origin of the pollen, 44.
Fertilization, 45.
Origin of organs, 49.
Morphology, 50.
Gradual development, 53.
Irritability, 54.
Action of coloured light, 54.
Colours, 55.
Excretions, 56.
—— of Dukhun, Col. Sykes on the, 1837, 239.
——, *vide* Plants.

Bovidæ, fossil, British, Prof. Owen on, 1843, 232.
Brachiopoda, 1834, 224; Ægean Sea, 1843, 141, 193; Irish, 1843, 259; 1857, 108, 225; West coast of N. America, 1856, 298; North-east Atlantic, &c., 1856, 114; South European, 1850, 265; British, 1860, 222.
——, list of, for local museums, 1855, 116.
——, Dr. Carpenter on the microscopic structure of the shells of, 1844, 16; 1847, 93.
Brachyura, Irish, 1843, 267; 1852, 293; 1857, 112; 1858, 263, 265, 286, 292; 1859, 80; 1860, 31; of the Clyde, 1856, 50.
——, British, 1850, 243; list of, 1860, 222.
Brain and nervous system, Dr. W. C. Henry on the physiology of the, 1833, 63.
—— and nervous system, report of the Dublin Committee on the pathology of the, 1836, 283.
Brass, R. Mallet on its power to preserve cast- and wrought-iron in sea-water, 1838, 293.
Brassica oleracea (wild cabbage), Prof. Buckman on, 1859, 28; 1860, 37.
Breaks for railway trains, experiments on, by W. Fairbairn, 1859, 76.
Brendel's water-pressure engine, J. Glynn on, 1848, 12.
Bridges, P. W. Barlow on the mechanical effect of combining girders and suspension chains, &c., 1857, 238.
——, suspension, C. Vignoles on their adaptation to sustain the passage of railway trains, 1857, 154; 1858, 293.
——, experiments on the effect of vibratory action and long-continued changes of load upon wrought-iron girders of, by W. Fairbairn, 1860, 45.
British Association Catalogue of Stars (extension of the Royal Astronomical Society's Catalogue), report on, 1838, 316; 1839, 174; 1840, 425; 1841, 330; 1842, 206; 1845, 340.
Bromic acid, its effects when injected into the veins, J. Blake on, 1845, 83.
Bromides, test for chlorine in, Prof. Johnston on, 1831–32, 466.
Bromine in salt springs, Dr. Daubeny on, 1836, 16.
—— and iodine, Dr. T. Andrews on the heat of combination of, 1849, 78.
Brychetus Mulleri, fossil, Prof. Agassiz on, 1844, 293.
Bryozoa of the Ægean Sea, 1843, 151; Irish, 1843, 284; 1852, 296; West coast of N. America, 1856, 298; British, with localities, 1850, 242. (*vide* Polyzoa.)
Bubulin, Prof. Johnston on, 1831–32, 526.
Buccinidæ, Irish, 1843, 257; 1852, 292; 1857, 106, 228; Ægean, 1843, 138; South European, 1850, 266, *et seq.*; North-east Atlantic, &c., 1856, 131; West Coast of North America, 1856, 341; British, 1850, 204, 226; 1860, 218.
Buccinum reticulatum, C. W. Peach on, 1843, 129.
Bulimus, Dr. W. Carpenter on the structure of the shell of the, 1847, 109.
Bullidæ of the Ægean Sea, 1843, 134, 187; of Ireland, 1843, 252; of the West coast of N. America, 1856, 313; of the North-east Atlantic, 1856, 145; British, 1860, 219.
Bylandt's "Théorie des Volcans," extracts from, by R. Mallet, 1850, 21.

Cacciatore mercurial dish, used in Seismometry, R. Mallet on the, 1858, 73, 78.
Caffre languages, 1847, 189, 218.
Calcareous formations of North America, Prof. H. D. Rogers on the, 1834, 51.
Calcium, chloride of, experiments made at the Kew Observatory on insulation by means of, 1844, 138.
Callionymidæ of the China and Japan seas, Sir J. Richardson on the, 1845, 210, 319.
Calyptræa, Dr. W. Carpenter on the structure of the shell of the, 1847, 114, 133.
Camacadæ of Ireland, 1843, 261; British, 1860, 221.
Cameroons language, 1847, 172.
Camphor, artificial, analysis of, 1831–32, 512.
——, Dr. Daubeny on the term, 1851, 127.
Canals, G. Rennie on the progress of hydraulic engineering with reference to, 1834, 415; in England, 473.
Canis, fossil, British, Prof. Owen on the, 1842, 70.
Cannon, on metals for, 1855, 100.
Capillary attraction, report by Rev. Prof. Challis on the theory of, 1834, 253; 1836, 249.
—— ascension and diffusion of saline solutions, 1859, 306.
Capra, fossil, British, Prof. Owen on the, 1843, 236.
Caprellidæ, British, C. Spence Bate on the, 1855, 60.
Caprimulgidæ of North America, 1836, 179; of Dukhun, 1837, 248; of Ireland, 1840, 372.
Carbon, bisulphuret of, Prof. Johnston on, 1831–32, 463.
——, new chloride of, 1831–32, 518.
Carbonate of lead, Prof. Johnston on, 1831–32, 431.
—— of lime (Arragonite), Prof. Johnston on, 1831–32, 480; hydrated, 481.
—— of soda, Dr. Daubeny on its origin in certain secondary rocks, 1836, 24.
—— of soda and lime, 1831–32, 480.
Carbonic acid evolved from mineral waters, Dr. Daubeny on, 1836, 36, 71.
—— acid, Dr. G. L. Roupell on its effects when thrown into the veins and the carotid artery, 1841, 28.
—— acid, its action on the growth of plants, by R. Hunt, 1848, 84; by Dr. Daubeny, 1848, 97; 1849, 56; 1850, 159.
Carboniferous system, table of British fishes of the, by Prof. Agassiz, 1843, 195.

Carcharidæ of New Zealand, Sir J. Richardson on the, 1842, 29.
—— of Ireland, 1840, 397; of New Zealand, 1842, 29; of the seas of China and Japan, 1845, 194, 317.
Cardiaceæ, microscopic structure of the shells of, Dr. W. B. Carpenter on the, 1847, 102.
Cardiadæ of the West Coast of North America, P. P. Carpenter on the, 1856, 307.
—— of Strangford Lough, 1857, 105, 106, 107, 108, 109.
Cardoons (vegetable), Prof. J. Buckman on the growth of, 1857, 212.
Carduus tuberosus, C. acaulis, and C. arvensis, Prof. Buckman on the growth of, 1857, 214; 1859, 26; 1860, 39.
Carnivora of North America, 1836, 138; of Ireland, 1840, 358.
——, fossil, British, Prof. Owen on the, 1842, 62.
Cartilaginei (Pisces) of N. America, 1836, 221; of New Zealand, 1842, 29; Irish, 1840, 397; 1852, 292; of the China and Japan seas, 1845, 193.
Caryophylleadæ, British, 1860, 234.
Catalogue of Philosophical Memoirs, preliminary report on the formation of, by A. Cayley, R. Grant, and Prof. G. G. Stokes, 1856, 463.
Cattle-food, fenugreek used for flavouring, 1859, 28.
Cave-temples of Dukhun, Col. Sykes on the, 1837, 255, 259.
Cells of plants, Dr. Lindley on the, 1833, 28.
Celtic language, Dr. C. Meyer on the importance of the study of the, as exhibited by the modern Celtic dialects, 1847, 301.
Cephalaspis, fossil, Prof. Agassiz on the, 1842, 87; 1843, 195.
Cephalopoda, Rev. L. Jenyns on the state of our knowledge of the, 1834, 218.
—— of the Ægean Sea, Prof. E. Forbes on the, 1843, 131.
—— of Ireland, W. Thompson on the, 1843, 248.
——, British, Prof. E. Forbes on, 1850, 241.
——, British, list of, compiled by R. M'Andrew, 1860, 218.
—— of the North-east Atlantic, &c., R. M'Andrew on the, 1856, 133, 154.
—— of the west coast of North America, P. P. Carpenter on the, 1856, 345.
——, list of, for local museums, 1855, 114.
——, Dr. Carpenter on the microscopic structure of the shells of, 1847, 116.
Cepolidæ of the Japan and China seas, Sir J. Richardson on the, 1845, 277.
Ceramites Hisingeri, Prof. G. Forchhammer on the, 1844, 162.
Cerasine (gum), 1831–32, 511.
Cereal grasses, experiments by Prof. J. Buckman on the growth of the, 1857, 206; 1859, 30; 1860, 35.
Cerebellum, Dr. W. C. Henry on the, 1833, 63.
Cerebrum, Dr. W. C. Henry on the, 1833, 63.
Cerithiadæ of Ireland, 1843, 257; of the Ægean Sea, 1843, 139, 190; North-east Atlantic, 1856, 124; West coast of North America, 1858, 325; South European, 1850, 266; British, 1850, 202, 224; 1860, 219.
Certhiadæ of North America, 1836, 177; of Ireland, 1840, 371.
Cervidæ, Irish, 1840, 361.
Cervus, fossil, British, Prof. Owen on the, 1843, 236.
Cestoidea, Irish, 1843, 276; 1852, 295.
——, British, 1860, 229.
Cestraciontidæ of the China Sea, Sir J. Richardson on, 1845, 195.
Cetacea of North America, Sir J. Richardson on the, 1836, 161.
——, Irish, W. Thompson on, 1840, 363.
——, fossil, British, Prof. Owen on the, 1842, 72.
Cetiosaurus brevis, Prof. Owen on the, 1841, 94; C. brachyurus, 100; C. medius, 100 C. longus, 101.
Cetone, Dr. Daubeny on the term, 1851, 130.
Chabasie, Prof. Johnston on the mineral, 1837, 192.
Chætodontidæ of North America, Sir J. Richardson on the, 1836, 206, 210.
—— of the China and Japan seas, 1845, 244.
Chains, suspension, and girders, on the mechanical effect of combining, by P. W. Barlow, 1857, 238.
Chamaceæ, Dr. Carpenter on the microscopic structure of the shells of, 1847, 100.
Characidæ of the London Clay, Prof. Agassiz on, 1844, 293.
Charadriadæ of Dukhun, 1837, 250; of N. America, 1836, 183; of Ireland, 1840, 374.
Charts, selenographical, W. De La Rue on the value of photography in the production of, 1859, 147.
Cheiracanthus, fossil, Prof. Agassiz on, 1842, 87; 1843, 194.
Cheirolepis, fossil, Prof. Agassiz on, 1842, 87; 1843, 195.
Cheiroptera of Ireland, 1840, 358; 1852, 291; of Dukhun, 1837, 246; of North America, 1836, 138.
——, fossil, British, Prof. Owen on the, 1842, 56.
Chelonia, North American, 1836, 199; Irish, 1840, 383.
——, fossil, Prof. Owen on, 1841, 160 1859, 166.
Chelonidæ (Turtles), fossil, British, Prof. Owen on the, 1841, 168.
Cheluridæ, British, C. Spence Bate on the, 1855, 59.
Chemical action of the solar radiations, report on the state of our knowledge of the,

being facts gathered from the transactions of learned societies and scientific periodicals of Europe and America, by R. Hunt, 1850, 137.
Chemical action of light, Prof. Bunsen and Dr. Roscoe on, 1856, 62.
—— action of the solar radiations, R. Hunt on the, 1852, 262 :—
Analysis of spectrum by absorbent media, No. 1 :—
A. Series of yellow glasses, 262.
B. Series of red glasses, 263.
C. Series of green glasses, 264.
D. Series of blue glasses, 266.
E. Miscellaneous, 267.
Chemical series, No. 1. Chemical spectra obtained after the prismatic spectrum has been analysed by the interposition of transparent coloured screens, 268.
Photographic agent—Collodio-iodide of silver on glass plates, 268.
Glasses (A), yellow media, 268.
Glasses (B), red media, 269.
Glasses (C), green media, 270.
Glasses (D), blue media, 271.
(E) Miscellaneous series, 272.
Second report, 1853, 68 :—
The chemical preparation.
(A) Series of yellow glasses, 68.
Red series, 77.
Quinine solution, 78.
—— combinations, Dr. T. Andrews on the heat of, 1849, 63.
—— composition of cast-iron by the hot and cold blast, Dr. T. Thompson on the, 1837, 117.
—— compounds, on, 1859, 1.
—— examination of rocks and minerals, by A. Gages, 1859, 65.
—— mineralogy, Rev. Dr. Whewell on, 1831–32, 343.
—— notation, on, 1831–32, 345, 445 ; 1835, 207.
—— science, Prof. J. F. W. Johnston's report on, 1831–32, 414–529 :—
Introduction.
Combining ratios, 415.
All atomic weights multiples of that of hydrogen, 416.
Relation between atomic weights and specific gravities, 416.
Can we obtain the true atoms, or only multiples of them ? 417.
Doctrine of volumes, 420.
Dumas's researches on the density of gases and vapours, 421.
Isomorphism, use of, in determining the compositions of oxides, &c., 422.
Oxides of chromium, 423.
Silica, 423.
Application of isomorphism to mineral compounds, 424.
Isomorphous groups, 425.
Relation of the forms of potash and soda, 427.
Chemical science, *continued.*
Forms of mineral substances, 427.
Differences between the angles of similar crystals of the same group, 428.
Plesiomorphism, 429.
Homoiomorphism, 429.
Influence of temperature on crystalline forms, 430.
Isomorphism of potash and ammonia +two atoms of water, 431.
Dimorphism, 431.
Isodimorphism, 433.
Isomerism, 434.
Polymerism and metamerism, 435.
1. List of isomeric bodies, 436.
2. List of metameric bodies, 438.
3. Polymeric substances, 439.
Sulphur salts, 440.
Chlorine salts, 442.
Chemical notation, 445.
Arbitrary symbols, 446.
Part II.—1. Inorganic Chemistry :—
Physical relations of the gases, 447.
Condensation of the gases, 450.
Law of Mariotte, 451.
Simple substances—non-metallic. Hydrogen gas, 452.
Basifying power of hydrogen, 452.
Water, maximum density of, 453.
Steam, 454.
Ice, 454.
Persulphuretted hydrogen, 454.
Nitrogen, 455.
Phosphuretted hydrogen, 456.
Phosphoric acid, 457.
Metaphosphoric acid, 458.
Sulphur in mineral waters, 460.
Sulphuretted hydrogen, action of, on nitric acid, 460.
Hyposulphurous acid, 461.
Sulphurous acid gas, 461.
Anhydrous sulphuric acid, 462.
Deutoxide of chlorine, 462.
Chlorous acid, 462.
Sulphuret of phosphorus and chlorine, 463.
Bisulphuret of carbon, 463.
Muriate, hydriodate, and hydrobromate of phosphuretted hydrogen, 464.
Oxides of chlorine and iodine, 465.
Perchloric acid, 466.
Iodic acid, 466.
Test for chlorine in bromides, 466.
Oxacids of cyanogen, 467.
Metals, precipitation of, from solutions in a malleable state, 467.
Electro-negative metals, — vanadium, 468.
Vanadiate of lead, 470.
Tellurium, 471 ; metallic tellurium, tellurous acid, telluric acid, persulphuret of tellurium, chlorides of tellurium, 472–474.
Artificial ultramarine, 474.

Chemical science, *continued.*
Electro-positive metals, reduction of, 475.
Potash, 475.
Barytes and strontian, separation of, 475.
Lime, 476.
Thorium, 476.
Manganese, 476.
Zinc and Oxide of zinc, 477.
Iron, carburets of, 478.
Lead, sulphurets of, 478.
Bismuth, expansion of, on becoming solid, 478.
Bismuth, oxide of, 478.
Copper, phosphuret of, 479.
Salts, 479.
Iodate of soda, 480.
Carbonate of soda and lime, 480.
Carbonate of lime (Arragonite), 480.
Hydrated carbonate of lime, 481.
Hyposulphite of barytes, 481.
Carbonate of lead, 481.
Sulphate of copper, 482.
Red salts of manganese, 482.
Peroxalate of iron, action of light upon, 482.
Submuriate of iron, 483.
Hydrocarburetted chlorides of platinum, 483.
Compound cyanides, 484.
Mineral Chemistry:—
Phosphates of lead, 484.
Octohedral minerals, 485.
Hornblende and augite, 486.
Artificial mineral compounds, 486.
State of Inorganic Chemistry:—
Elementary substances, 487.
Table of the most important binary compounds of the elementary substances with each other, 488, 490.
Part III. Organic Chemistry:—
Section 1. Vegetable products, 496.
Vegetable Acids:—
Tartaric and paratartaric acids, 500.
Pyrotartaric acid, 501.
Pyroparatartaric acid, 501.
Benzoic acid and benzule, 502.
Benzamid, 503.
Metamorphic oil of bitter almonds, 503.
Gallic acid, 503.
Acetic acid, 504.
Chloroxalic acid, 505.
Oxamid, 505.
Elardic and palmic acids, 505.
List of vegetable acids, 506.
Vegetable alkalies, 508.
Mode of testing Peruvian bark, 508.
Test for cinchonin in sulphate of quinine, 509.
Atropin and Hyoscyamin, 509.
Coniin, 509.
List of vegetable alkalies, 510.
Indifferent vegetable substances, 511.
Manna sugar (mannite), analysis of, 511.
Chemical science, *continued.*
Gums — arabine, bassorine, cerasine, analysis of, 511.
Vegetable and bees'-wax, analysis of, 512.
Oil of turpentine and Artificial camphor, analysis of, 512.
Resins and gum resins—acid bodies, 512.
Basic resins, 513.
Subresins, 513.
Opium, principles obtained from it, 513.
List of indifferent vegetable principles, 514.
List of colouring matters, 515.
List of gums, resinous substances, stearoptes, &c., 516.
Products of destructive distillation, &c., 517.
Etherine, the term Etherine=E. proposed for the radical or base of the æthers, 517.
Chloral, 518.
New chloride of carbon, 518.
Bichlorine æther, 519.
Perchlorine æther, 519.
Chlorovinic and chlorovinous acids, 519.
Naphthaline, 519.
Paraffin, 519.
Eupion, 520.
Organic matter in mineral waters, 521.
Section 2. Animal principles and products, 521.
Blood, 522.
Albumen, 523.
Bile, 523.
Urea, 524.
Uric acid, 524.
Cyanurate of urea, 524.
Purpuric acid, 525.
Erythric acid, 525.
Lactic acid, 525.
Milk, 525.
Bubulin, 526.
Odorin, animin, &c., 526.
Olanin, 526.
Ammolin, 526.
Paraffin and eupion, 526.
List of acid principles, 528.
List of indifferent and alkaline principles, 528.
Chemical theory of thermal springs, Dr. Daubeny on the, 1836, 68.
—— theory of volcanos, W. Hopkins on the, 1847, 38.
—— transformations, heterologous, homologous, and isologous, 1859, 17.
Chemistry, agricultural, 1859, 31.
——, animal, Prof. Johnston on, 1831–32, 521.
——, electro-, on, 1840, 209; 1845, 91; 1857, 158.
——, inorganic, report on, by Prof. Johnston, 1831–32, 447.

Chemistry, mineral, Prof. Johnston's report on, 1831–32, 484.
—— of mineralogy, Rev. Dr. Whewell on the, 1831–32, 343.
——, organic, Prof. Johnston's report on, 1831–32, 496.
——, organic, applied to physiology and pathology, Dr. Lyon Playfair's abstract of Liebig's report on, 1842, 42.
——, organic, report on the progress and state of, by G. C. Foster and Dr. Odling, 1859, 1.
Chimæridæ of North America, Sir J. Richardson on the, 1836, 221.
—— of New Zealand, Sir J. Richardson on the, 1842, 29.
—— of the Oolitic system, 1843, 201.
—— of the Cretaceous system, 1843, 204.
—— of the Tertiary system, 1843, 206.
Chinese and Indo-Chinese languages, on the, 1847, 247.
Chiton, Dr. Carpenter on the structure of the shell of, 1847, 114, 132.
Chitonidæ of the Ægean Sea, 1843, 135, 188; Irish, 1843, 259; N.E. Atlantic, 1856, 145; West coast of N. America, 1856, 317.
Chloral, on, 1831–32, 518.
Chloric acid, J. Blake on its effects when injected into the veins, 1845, 84.
Chloride of carbon, new, on a, 1831–32, 518.
—— of barium and sulphate of magnesia, or sulphate of soda, or sulphate of zinc, or protosulphate of iron, or sulphate of copper, or sulphate of ammonia, Dr. T. Andrews on the heat of combinations of, 1849, 71, 72.
Chlorides of tellurium, Prof. Johnston on the, 1831–32, 474.
——, hydrocarburetted, of platinum, 1831–32, 483.
Chlorine, deutoxide of, Prof. Johnston on, 1831–32, 462.
—— and iodine, oxides of, Prof. Johnston on, 1831–32, 465.
—— and phosphorus, sulphuret of, Prof. Johnston on, 1831–32, 463.
—— in bromides, test for, Prof. Johnston on, 1831–32, 466.
—— gas, Dr. T. Andrews on the heat produced by combustions in, 1849, 77.
—— salts, Prof. Johnston on, 1831–32, 442.
Chlorous acid, Prof. Johnston on, 1831–32, 462.
Chlorovinic and chlorovinous acids, Prof. Johnston on, 1831–32, 519.
Chloroxalic acid, Prof. Johnston on, 1831–32, 505.
Chœropotamus, fossil, British, Prof. Owen on, 1843, 226.
Chondropterygii eleutheropomi and C. trematopneontes of North America, Sir J. Richardson on the, 1836, 221.
Chromium, oxides of, Prof. Johnston on the, 1831–32, 423.
Cidaridæ, British, 1860, 230.
——, oolitic, Dr. T. Wright on, 1856, 399, 400.
Circulation in the freshwater Polyzoa, Prof. Allman on the, 1850, 312,
—— in the Amphipoda, C. Spence Bate on the, 1855, 50.
—— in plants, Prof. Lindley on, 1833, 32.
Cirrhatulus, Dr. T. Williams on, 1851, 191, 200, 216, 236.
Cirrhitidæ of the China and Japan seas, Sir J. Richardson on the, 1845, 239.
Cirrhobranchiata of the Ægean Sea, 1843, 133, 135, 188; of Ireland, 1843, 259; of the North-east Atlantic, &c., 1856, 117; West coast of N. America, 1856, 317; British, 1850, 200, 220; 1860, 219.
Cirripedia, Rev. L. Jenyns on the state of our knowledge of the, 1834, 225.
——, Irish, W. Thompson on, 1843, 265, 266; 1852, 293.
——, British, with localities, Prof. E. Forbes on, 1850, 244.
——, British, list of, compiled by R. M'Andrew, 1860, 226.
——, list of, for local museums, 1856, 121.
Cladocera, Irish, W. Thompson on, 1843, 269; 1852, 294; British, 1860, 225.
Cladyodon, fossil, British, Prof. Owen on, 1841, 155.
Clay, ferruginous, of Dukhun, 1857, 224.
—— formations of North America, 1834, 18 *et seq.*
——, London, Prof. Agassiz on the fossil fishes of the, 1844, 279.
Cleat in coal, Prof. Phillips on the, 1856, 395.
Cleavage and foliation in rocks, Prof. Phillips on, 1856, 369: *vide* Rocks.
Clematius reticulatus, fossil, 1848, 194.
Climate of the—
Arctic Regions (Greenland, Iceland, North America), 1847, 376, Table 1; 1848, 84, Table 1.
United States and Canada, 1847, Tables 1, 2, 3, 4; 1848, 84, Table 1.
Mexico and the West Indies, 1847, Tables 4, 5; 1848, 84, Table 1.
South America, 1847, Table 5; 1848, 84, Table 1.
Africa, Islands of the Atlantic, 1847, Table 6; 1848, 84, Table 1.
Great Britain, 1847, Tables 6, 7; 1848, 84, Table 1.
France, 1847, Table 8; 1848, 84, Table 1.
Switzerland, 1847, Table 9; 1848, 84, Table 1.
Holland and Belgium, 1847, Table 9.
Germany, 1847, Tables 9, 10, 11, 12, 13; 1848, 84, Table 2.
Italy, 1847, Tables 13, 14; 1848, 84, Table 2.

Climate, *continued.*
Spain and Portugal, 1847, Table 14; 1848, 84, Table 2.
Mediterranean, coast of, 1847, Table 14; 1848, 84, Table 2.
Austrian Dominions, 1847, Table 14.
Ottoman Empire, Persia, Egypt, 1847, Table 15.
Denmark, Norway, Sweden, 1847, Table 15; 1848, 84, Table 2.
Russia in Europe, Siberia and Chinese Tartary, Nova Zembla, 1847, Table 16; 1848, 84, Table 2.
India and China, Malay Archipelago, 1847, Tables 17, 18; 1848, 84, Table 1.
South Africa, 1847, Table 18.
Australia, Van Diemen Island, New Zealand, 1847, Table 18.
Corrections for the hours of observation to the mean temperature of the respective months, 1847, Tables 19, 20, 21, 22, 23.
—— of North America, Sir J. Richardson on the, 1836, 128.
—— of Bengal, Col. Sykes on the, 1852, 252.
—— of Birmingham, W. Wills on the, 1852, 297.
—— of Bombay, General Sabine on the, 1845, 73.
—— of Dukhun, Col. Sykes on the, 1837, 231.
—— of Southampton, J. Drew on the, 1851, 54.
—— of Toronto in Canada, General Sabine on the, 1844, 42.
—— and productiveness of a country, remarks by General Cullen and others on the effect of trees on the, 1851, 100.
——, remarks by Prof. Dove on his maps of the isothermal lines of the globe, and conclusions in regard to climatology deducible from, 1848, 85.
Climatology, Prof. J. D. Forbes on, 1831–32, 213.
Clock, storm, of the Kew observatory, 1844, 142; 1850, 178.
Clouds, Prof. J. D. Forbes on, 1831–32, 245; 1840, 111.
——, Prof. J. D. Forbes on the colour of the, 1840, 120.
Clupeidæ, Irish, 1840, 392; British, 1844, 302.
—— of New Zealand, Sir J. Richardson on the, 1842, 26.
—— of the China and Japan seas, Sir J. Richardson on the, 1845, 304.
—— of North America, Sir J. Richardson on the, 1836, 215, 217.
——, fossil, of the London clay, Prof. Agassiz on, 1844, 292, 308.
Coal, Prof. Phillips on the cleat in, 1856, 395.
—— and other fuels, W. Fairbairn on the constituents of, 1844, 102.
Coal-gas, Prof. Bunsen and Dr. Lyon Playfair on a simple method for the analysis of, 1845, 149.
——, nature of, 1845, 153.
Coal-measures and the lower new red sandstone at Collyhurst, report on the excavation made at the junction of the, by E. W. Binney, 1843, 241.
Coal-mines, explosions in, and revolving storms, report on the relation between, by T. Dobson, 1855, 1.
Coal-tar as a covering varnish for iron, R. Mallet on, 1840, 240; 1843, 23.
Coccosteus oblongus, fossil, of the Devonian system, Prof. Agassiz on, 1842, 87; C. latus, 87; C. cuspidatus, 87.
Cod-fish, Prof. Owen on the skull of the, 1846, 178 *et seq.*
Coelenterata, British marine, list of, compiled by R. M'Andrew, 1860, 232.
Coelum Australe Stelliferum, report on the reduction of Lacaille's stars in the, 1839, 171; 1840, 427; 1841, 327; 1842, 205; 1845, 339; 1847, 379.
Collyritidæ, oolitic, Dr. T. Wright on, 1856, 399, 402.
Colour of the sky and clouds, Prof. J. D. Forbes on the, 1840, 120.
Colouring matter of water, Dr. Daubeny on the, 1836, 35.
—— matters, list of, by Prof. Johnston, 1831–32, 515, 516.
—— matters of madder, Dr. Schunck on the, 1846, 24; 1847, 136; 1848, 57, 71.
Colours of plants, Dr. Lindley on, 1833, 55.
—— of thin plates, Rev. Dr. Lloyd on the progress of knowledge of, 1834, 338; of crystalline plates, 395.
Columbidæ of North America, 1836, 180; of Dukhun, 1837, 250; of Ireland, 1840, 372.
Colymbidæ of North America, 1836, 184; of Dukhun, 1837, 251; of Ireland, 1840, 379.
Comet of 1843, Dr. von Bogusławski on the, 1845, 86.
Comets, periodical, and of comets generally, Prof. Airy on, 1831–32, 159, 177, 188.
——, on the perturbation of, 1831–32, 177.
Compass, A. Smith on the deviations of the, in wooden and iron ships, 1854, 434.
Compounds, organic, Dr. Daubeny on the nomenclature of, 1851, 124.
Compteur, Morin's, notice of, in the report of a committee on a constant indicator for steam-engines, 1841, 309.
Conchacea, Ægean, 1843, 143; North-east Atlantic, &c., 1856, 104; British, 1850, 231; 1860, 221; Irish, 1843, 261; 1852, 293.
——, Dr. Carpenter on the microscopic structure of the shells of, 1847, 102.
Conchology, recent and fossil, enlarged exhibitions in illustration of, at the British Museum, report on, by the Marquis of Northampton, 1840, 443.
——, *vide* Shells.

Conduction of heat, Rev. Prof. Kelland on the, 1841, 1.
—— of heat, Prof. J. D. Forbes on the, 1852, 260.
Congruences, Prof. H. J. S. Smith on the theory of, 1859, 230; 1860, 127.
Coniin, Prof. Johnston on, 1831–32, 509.
Conirostres of North America, 1836, 174, 176, 193; of Dukhun, 1837, 249; of Ireland, 1840, 369; 1852, 291.
Constants, Gaussian, for 1829, A. Erman on the calculation of the, 1846, 92; 1847, 377; 1848, 98.
——, railway, reports on the determination of the mean values of, 1838, 197; 1841, 205, 247; appendix, 268.
Constellations, on the revision of the, 1844, 34.
Contagion, Dr. Henry's report on the laws of, 1834, 67–94.
Conus, on the structure of the shell of, 1847, 109, 132.
Copepoda, Irish, 1843, 270; British, 1860, 225.
Copper, phosphuret of, Prof. Johnston on, 1831–32, 479.
——, solution of, in nitric acid, Dr. T. Andrews on, 1849, 75.
——, sulphate of, and chloride of barium, Dr. T. Andrews on the heat of combination of, 1849, 72.
——, sulphate of, and nitrate of barytes, Dr. T. Andrews on the heat of combination of, 1849, 73.
——, sulphate of, in grain, &c., Prof. Johnston on, 1831–32, 482.
Coptic language, 1847, 210, 222.
Corbula, Dr. Carpenter on the structure of the shell of, 1847, 103.
Corn crops, experiments on the growth of, by Prof. J. Buckman, 1857, 206.
Coronæ, glories, &c., Prof. J. D. Forbes on, 1840, 135.
Corophiidæ, British, C. Spence Bate on the, 1855, 59.
Corrosion of iron, R. Mallet on, 1838, 253; 1840, 221; 1843, 1.
—— of railway bars, R. Mallet on the, 1843, 28; 1849, 88.
Corvidæ of North America, 1836, 175; of Dukhun, 1837, 249; Irish, 1840, 370.
Cottoideæ of New Zealand, Sir J. Richardson on, 1842, 18.
—— of the China and Japan seas, Sir J. Richardson on the, 1845, 211.
—— of North America, Sir J. Richardson on the, 1836, 205, 209.
——, Irish, 1840, 383; 1852, 291; British, 1844, 302.
Cotton and silk fabrics of Dukhun, Col. Sykes on the, 1837, 325.
—— flax, Dr. Hodges on, 1852, 286.
Couple, algebraic, Dr. C. J. Hargreave on the geometrical interpretation of the, 1857, 184.
Cracidæ of North America, 1836, 180.
Cranes, hydraulic, Sir W. G. Armstrong on, 1854, 417.
Cranial bones, Prof. Owen on the, 1846, 274.
—— system, Okenian, Prof. Owen on the, 1846, 242.
——, *vide* Skull.
Crenic acid in springs, Dr. Daubeny on, 1836, 30.
Crepidula, Dr. Carpenter on the structure of the shell of, 1847, 114.
Cretaceous formations of North America, Prof. H. D. Rogers on the, 1834, 50.
—— system, British fossil fishes of the, Prof. Agassiz on, 1843, 203.
Crinoidea, Dr. Carpenter on the structure of the shell of, 1847, 126.
——, Irish, W. Thompson on, 1843, 279.
—— of the Ægean Sea, Prof. E. Forbes on, 1843, 142, 149.
——, British, 1860, 230.
——, oolitic, Dr. T. Wright on, 1856, 398, 403.
Cristatella, Prof. Allman on the polyzoon, 1850, 305, 326.
Crocodile, Prof. Owen on the cranium of the, 1846, 190.
Crocodilia, fossil, Prof. Owen on, 1841, 65; 1859, 164.
——, North American, 1836, 200.
Crop-plants, corn and green feeding, on the growth of, 1857, 206, 210; 1859, 30, 31; 1860, 37.
Crops, on field experiments and laboratory researches on the constituents of manures essential to, 1859, 31.
Crustacea, state of our knowledge of the, Rev. L. Jenyns on the, 1834, 191.
——, British, with their localities, Prof. E. Forbes on, 1850, 243.
——, British, list of, compiled by R. M'Andrew, 1860, 222:—Brachyura, 222; Anomoura, Macroura, Stomapoda, Amphipoda Normalia, 223; Amphipoda Hyperina, Aberrantia (Læmodipoda), Isopoda Aberrantia (Anisopoda), 224; Isopoda (Normalia), 225.
—— of Dukhun, Col. Sykes on the, 1837, 252.
—— of Ireland, W. Thompson and others on the, 1843, 266; 1852, 293; 1857, 112; 1858, 178, 262, 265, 286, 291; 1859, 80; 1860, 29.
—— of Frith of Clyde, 1856, 50.
——, Dr. Carpenter on the microscopic structure of the shells of, 1847, 127, 134.
——, Edriophthalma, British, C. Spence Bate on, 1855, 18.
——, list of the Podophthalma for local museums, 1855, 119.
——, fossil, of the upper Silurians, 1859, 64.
Cryptogamous plants, higher, Prof. Henfrey on the reproduction of, 1851, 102.
Crystalline slags, Dr. Percy and Prof. Miller on the, 1846, 351.
Crystallographical speculations, and their

application to minerals, by the Rev. Dr. Whewell, 1831–32, 327.
Crystals, artificial, Rev. Dr. Whewell on, 1831–32, 347.
——, epigene and pseudomorphous, Prof. Johnston on, 1837, 491.
——, Rev. Prof. Powell on the transmission of heat through, 1854, 348.
Ctenacanthus, fossil, Prof. Agassiz on, 1842, 87; 1843, 194.
Ctenobranchii, of the China and Japan seas, Sir J. Richardson on the, 1845, 203.
Ctenoidæ of the English coast, Prof. Agassiz on the, 1844, 302; fossil, 1843, 205, 207; of the London clay, 1844, 286, 307.
—— of the Cretaceous system, Prof. Agassiz on the, 1843, 205.
—— of the Tertiary system, Prof. Agassiz on the, 1843, 207.
Ctenophora, British, 1860, 234.
Ctenoptychius, fossil, Prof. Agassiz on, 1842, 87; 1843, 194.
Cuculidæ of North America, 1836, 177; of Dukhun, 1837, 249; Irish, 1840, 371.
Cuscuta epilinum, Prof. J. Buckman on the growth of, 1859, 23; 1860, 42.
Cyanides, compound, 1831–32, 484.
Cyanogen, oxacids of, Prof. Johnston on, 1831–32, 467.
Cycadeæ, Prof. Lindley on, 1833, 34.
Cyclobranchiata of the Ægean Sea, 1843, 133, 135, 188; of Ireland, 1843, 259; of the North-east Atlantic, &c., 1856, 116, 117; British, 1850, 200, 220; 1860, 219.
——, Dr. Carpenter on the structure of the shells of the, 1847, 113.
Cycloidæ, Acanthopterygian and Malacopterygian, of the London clay, Prof. Agassiz on the, 1844, 304, 308.
—— of the Cretaceous system, Prof. Agassiz on the, 1843, 205.
—— of the Tertiary system, 1843, 206.
Cyclopteridæ of the China seas, 1845, 204.
Cyclostomi of North America, 1836, 222; of New Zealand, 1842, 30; of Ireland, 1840, 399.
Cylinders and globes, glass, W. Fairbairn on the collapse of, 1858, 174.
Cylindrical tubes, W. Fairbairn on the resistance of, to collapse, 1857, 215.
Cyprææa, on the structure of the shell of, 1847, 109, 132.
Cyprinidæ, Irish, W. Thompson on, 1840, 390.
—— of the China and Japan seas, Sir J. Richardson on the, 1845, 287.
—— of North America, Sir J. Richardson on the, 1836, 213, 216.
——, British, 1860, 225.
Cystica, Irish, 1843, 276; British, 1860, 229.

Dahomey languages, 1847, 170.
Dalla language, 1847, 207.
Datura Stramonium and D. Tatula, Prof. J. Buckman on the growth of, 1857, 214; 1859, 25, 26.
Deaths, report on the registration of, by the Edinburgh sub-committee, 1835, 251.
Decapoda of Ireland, W. Thompson on the, 1843, 267; 1852, 293; 1857, 112; 1858, 265; 1860, 31; British, 1850, 243; 1860, 222.
Deer, fossil remains of, Prof. Owen on the, 1843, 236.
Deers, Prof. Jacob on the infraorbital cavities in, 1835, 208.
Delphinidæ, Irish, 1840, 363; 1852, 291.
Delphinula, Dr. Carpenter on the structure of the shell of, 1847, 116.
Dendrodus, fossil, Prof. Agassiz on the, 1842, 87; 1843, 195.
Dentalia of the Ægean Sea, 1843, 135, 188; Irish, 1843, 259; North-east Atlantic, &c., 1856, 117; West coast of North America, 1856, 317; British, 1850, 200, 220; 1860, 219.
Dentirostres of North America, Sir J. Richardson on the, 1836, 170, 173, 192.
—— of Ireland, W. Thompson on the, 1840, 366.
Despretz's (M.) experiments on the conduction of heat, 1840, 18.
Determinants, report on the theory of, by Prof. Sylvester, 1853, 66.
Devonian system, Prof. Agassiz on the fossil fishes of the, 1842, 80; 1843, 194.
—— fish, new forms of, 1860, 32.
Diademadæ, oolitic, Dr. T. Wright on the, 1856, 399, 400.
Dichobunes, fossil, British, Prof. Owen on the, 1843, 225.
Didelphys? fossil, British, Prof. Owen on the marsupial, 1842, 72.
Diffraction of light, Rev. Dr. Lloyd on the, 1834, 323.
Digitigrada of North America, 1836, 141, 143; of Dukhun, 1837, 246; of Ireland, 1840, 141.
Diluvian action over North America, Prof. H. D. Rogers on the, 1834, 14.
Dimorphism, Prof. Johnston on, 1831–32, 431.
Dimorphous bodies, Prof. Johnston's report on the state of our knowledge in regard to, 1837, 163:—
Introduction.
List of dimorphous bodies, 166.
Isodimorphous groups, 168.
Monomorphous groups, 175.
Analogous chemical groups, the members of which taken singly are monomorphous, but as groups are dimorphous, 185.
Bodies assuming two or more series of unlike physical properties, but of which the crystalline form belonging to each series has not been determined, 187.
Crystallized bodies not known to assume more than one form, which

Dimorphous bodies, *continued*.
yet exhibit unlike physical properties in different portions of their mass, 192.
Epigene and pseudomorphous crystals, 194.
Trimorphous bodies, 197.
Relation of dimorphism and molecular arrangement in general, to temperature, electricity, and mechanical pressure, 199.
Cause of dimorphism, 203.
Extent of dimorphism, 206.
Relation of the crystalline doctrine of dimorphism to the chemical doctrine of isomorphism, 209.
Desiderata, 214.
Dimyaria of Ireland, W. Thompson on the, 1843, 260; 1852, 293.
—— of the Ægean Sea, Prof. E. Forbes on the, 1843, 142, 191.
Dinosauria, fossil, British, Prof. Owen on, 1841, 102.
——, fossil, Prof. Owen on, 1859, 164.
Dioscorea Batatas (potato-yam), Prof. Buckman on the growth of, 1857, 211; 1859, 29; 1860, 43.
Dip circle for the determination of the earth's magnetic force in absolute measure, Rev. Dr. Lloyd on, 1858, 260.
Diphydæ, British, 1860, 232.
Diplacanthus, fossil, Prof. Agassiz on the, 1842, 87.
Diplopterus, fossil, Prof. Agassiz on the, 1842, 87; 1843, 195, 198.
Diprotodon of Australia, Prof. Owen on the nature and affinities of the, 1844, 224.
Dipsacus sylvestris and D. fullonum, Prof. Buckman on the growth of, 1859, 26; 1860, 39.
Dipterus, fossil, Prof. Agassiz on the, 1842, 87; 1843, 194.
Discoboli, Irish, W. Thompson on the, 1840, 395.
—— of New Zealand, Sir J. Richardson on the, 1842, 27.
—— of North America, Sir J. Richardson on the, 1836, 218, 219.
Disease, Liebig's theory of, 1842, 51.
Diseases, sporadic and specific, Dr. W. Henry on, 1834, 70.
—— of large towns in Scotland, report on the, 1842, 196.
Distribution and range in depth of Mollusca and other marine animals on the coasts of Spain, Portugal, Barbary, Malta, and South Italy in 1849, R. M'Andrew on the, 1850, 264.
Dodder and flax-seeds, experiments on the growth of the, by Prof. J. Buckman, 1859, 23; 1860, 42.
Dolomite of Howth, chemical examination of the, by A. Gages, 1859, 68.
——, pseudo-, chemical examination of, by A. Gages, 1859, 70.
Doridæ, J. Alder and A. Hancock on the British species of, 1844, 24.
—— of the Ægean Sea, 1843, 132, 186; Irish, 1843, 250; 1852, 292; Frith of Clyde, 1856, 50; West coast of North America, 1856, 313; British, 1860, 220.
Drainage, G. Rennie on the progress of hydraulic engineering with reference to, 1834, 415; in England, 473.
Dredging off the Mull of Galloway and the Mull of Cantire, &c., 1842, 213.
—— round the coasts of Anglesea, 1844, 390.
—— on the coasts of Spain, Portugal, Barbary, Malta, and Southern Italy, 1850, 264.
—— on the southern, western, and northern coasts of Great Britain, 1850, 192.
—— Frith of Clyde, report of committee on, 1856, 47.
—— Strangford Lough, Co. Down, by Dr. G. Dickie, 1857, 104.
—— committee (Belfast), report of the, by G. C. Hyndman, 1857, 220; 1858, 282; 1859, 116.
—— committee (Dublin), report of the, by Dr. J. R. Kinahan, 1858, 262; 1859, 80; 1860, 27.
Dredging-papers, examples of, 1843, 180.
Dreissena, Dr. Carpenter on the structure of the shell of the, 1847, 99, 131.
Dumas's researches on the density of gases and vapours, Prof. Johnston on, 1831–32, 421.
Dyeing, list of colouring matters, 1831–32, 515, 516.
——, Dr. Schunck on the colouring matters of madder, 1846, 24; 1847, 136; 1848, 57.
Dynamics, theoretical, report on the progress of (from the publication of the Mécanique Analytique of Lagrange in 1788 to the year 1857), by A. Cayley, 1857, 1.

Earth, on the figure of the, by G. B. Airy, 1831–32, 165, 178.
——, on the form of the, by W. Hopkins, 1847, 40.
——, Rev. Dr. Whewell on the motion of heat in the, 1835, 30; central heat, 31.
——, report on the effects of long-continued heat, illustrative of geological phenomena, by Rev. W. V. Harcourt, 1860, 175.
——, instructions for conducting experiments on the temperature of the, at various depths, 1836, 291.
——, Prof. J. D. Forbes on the temperature of the, 1831–32, 221; 1840, 66.
——, magnetism of the, Prof. Christie's report on the, 1833, 105.
——, report on the variations of the magnetic intensity of the, by General Sabine, 1837, 1, 497; errata, 500; 1838, 318.
——, Prof. Forchhammer on the influence

of fucoidal plants upon the formations of the, 1844, 155.
Earth, on the physical character of the moon's surface as compared with that of the, 1853, 84; 1854, 415.
Earth's crust, W. Hopkins on the form, solidification and thickness of the, 1847, 40; on the effects of subterranean forces on the, 57; vibratory motions of the, produced by subterranean forces, 74; on the production of a surface wave in the fluid beneath the, and its possible effects on the elevation of the crust, 88.
Earthquake phenomena, R. Mallet on the facts and theory of, 1847, 30; 1848, 98.
——, First report, by R. Mallet, 1850, 1:—
Literature of earthquakes, 2–24, 83.
Distribution of their occurrence both in time and in space upon the earth, 25.
Connexions between astronomical and meteorological phenomena and earthquakes, 63.
——, Second report, by R. Mallet, 1851, 272:—
Account of experimental admeasurements of the rate of earthquake wave-transit through some of the rocky and incoherent formations of the earth's surface, 272.
Of the construction of the earthquake catalogue, 317.
——, Third report, by R. Mallet, 1852, 1:—
Catalogue of recorded earthquakes, from 1606 B.C. to A.D. 1755, 1.
——, Third report *continued*. Catalogue of recorded earthquakes (from A.D. 1755–1784), 1853, 117.
——, Third report *continued*. Catalogue of recorded earthquakes (from A.D. 1784–1842), 1854, 1.
——, Fourth report. Discussion of the catalogue, 1858, 1.
—— shocks, register for (from July 1, 1842, to June 17, 1843), 1843, 126; (from Aug. 25, 1843, to Sept. 4, 1844), 1844, 86.
Earthquakes, Dr. Daubeny on their influence upon springs, 1836, 43.
—— in Great Britain, report of committee on registering shocks of, 1842, 92; 1843, 120; 1844, 85.
—— and elevation, W. Hopkins on the geological theories of, 1847, 33. *Vide* Elevation.
——, report on wave-transits, and on the construction of a self-registering seismometer, by R. Mallet, 1848, 98; 1850, 88; 1851, 272, 278; 1853, 86.
——, instruments and registers to record shocks of, in Scotland and Ireland, report of committee on, 1841, 46.
——, report of the committee, and their proceedings respecting seismometers, constructed under the superintendence of Major James, by General Portlock, 1854, 370.
Earthquakes, desiderata, ill-understood phenomena, &c., R. Mallet on, 1858, 124.
——, bibliography of, by R. Mallet, 1858, 106.
——, *vide* Seismometers.
Earthworm, Dr. T. Williams on the, 1851, 165.
Echeneidæ of North America, Sir J. Richardson on the, 1836, 218, 219.
—— of the China seas, Sir J. Richardson on the, 1845, 203.
—— of Ireland, 1852, 292.
Echidna setosa, Prof. Owen on the cranium of the, 1846, 198.
Echinodermata, Rev. L. Jenyns on the state of our knowledge of the, 1834, 227.
——, British, table of depths, &c. at which species of, were taken, Prof. E. Forbes on the, 1850, 211, 239, 257.
—— of the Ægean Sea, Prof. E. Forbes on the, 1843, 148.
—— of Ireland, 1843, 279; 1852, 295; 1857, 111; 1858, 179, 286; Frith of Clyde, 1856, 51.
——, British, list of, compiled by R. M'Andrew:—Crinoidea, Ophiuroidea, Asteroidea, Echinoidea, Holothuroidea, 1860, 230.
——, oolitic, Dr. T. Wright on the stratigraphical distribution of the, 1856, 396–404.
——, Dr. Carpenter on the structure of the skeleton of, 1847, 117.
Eclipse of the sun on July 28, 1851, suggestions for the observation of the, 1850, 361.
Eddies in rivers, on the cause of, 1833, 169.
Edentata of North America, Sir J. Richardson on the, 1836, 158.
Ediyah or Adiyah language, 1847, 173.
Edriophthalma, Irish, 1843, 268; 1852, 294; British, 1860, 223.
——, British, C. Spence Bate on the, 1855, 18:—
Part I. The Amphipoda.
Introduction.
The homologies, 24.
On the microscopic structure of the integumentary skeleton, 38.
The process of moulting, 41.
On the reproduction of lost parts, 43.
On the auditory organs, 44.
Taste, 48.
The primæ viæ, 48; the liver, 49.
Urinary organs, 49.
The vascular system, 50.
The branchiæ, 51.
Organs of generation, 52, 53.
On the development of the young, 55.
On the nervous system, 56.
Table of species, 57.
Reference to drawings, 60.
Education in Dukhun, Col. Sykes on the state of, 1837, 270.
Egyptian language, 1847, 254.
—— researches in reference to Asiatic and

African ethnology, Dr. C. C. J. Bunsen on the results of, 1847, 254.
Elardic and palmic acids, Prof. Johnston on, 1831–32, 505.
Electrical observatory, Kew, 1843, xxxix; 1844, 121; 1845, 341; 1848, xvii; 1849, 80, 113; 1850, 176; electrical apparatus, 1851, 336.
—— observatory for transport, F. Ronalds on an, 1851, 338.
—— currents among stratified rocks, galvanic experiments to determine the existence or non-existence of, by H. L. Pattinson, 1839, 23.
—— observations at Kew, report by W. R. Birt on the discussion of the, 1849, 113.
Part I. Positive electricity, 113.
Part II. Negative electricity, 176.
Electricity, magnetism, and heat, Rev. Dr. Whewell's report on the mathematical theories of, 1835, 1–34:—
Introduction, 1.
Electricity, 2.
Laplace's coefficients, 7.
Magnetism, 10.
Heat, 17.
1. Experimental thermotical principles, 17.
2. Fundamental mathematical formulæ, 19.
3. Mathematical solutions of the equations, 24.
4. Applications of the solutions, 30.
a. Motion of heat in the earth, 30.
b. Central heat, 31.
c. Cosmical heat, 32.
——, report on thermo-electricity, by the Rev. Prof. Cumming, 1831–32, 301.
——, atmospheric, Prof. J. D. Forbes on, 1831–32, 252; 1840, 116.
——, atmospheric, experiments on frequency of, at the Kew observatory, 1844, 141; 1850, 177, 179; 1851, 354.
——, atmospheric, experiments on induction by, at the Kew observatory, 1844, 140.
——, atmospheric, frequency paper for observation of, used at Kew observatory, 1850, 179.
——, atmospheric, report of committee on portable apparatus for observing, 1860, 44.
——, Prof. Schönbein on phenomena of polarization caused by, 1840, 212.
—— of metallic veins, R. W. Fox on the, 1837, 133.
——, *vide* Friction, Galvanic experiments, Magnetism.
Electro-chemistry, researches in, by Prof. Schönbein, 1840, 209; 1845, 91.
——, report on, by Prof. W. A. Miller, 1857, 158.
Electrograph at the Kew observatory, on the, 1844, 126.
Electrolysis of water, the odour developed by the, Prof. Schönbein on, 1840, 209; 1845, 92.
Electro-magnetic meteorological register at Kew observatory, report on, by Prof. Wheatstone, 1843, xl.
Electro-meteorological observations at the Kew observatory, specimen of, 1844, 132; 1850, 179; 1851, 354, 357.
Electrometer, atmospheric, self-recording, report of committee on, 1860, 44.
Electrometers of the Kew observatory, 1843, xxxix; 1844, 123, 135, 141, 142; 1845, 341; 1849, 81; 1851, 337.
Electro-negative metals, 1831–32, 468.
Electro-positive metals, reduction of, 1831–32, 475.
Electroscope, Bennet's gold-leaf, at the Kew observatory, 1844, 125; 1851, 337.
Elephas, fossil, British, Prof. Owen on, 1843, 208.
—— primigenius, remains of, N. America, 1834, 25.
Eleutheropomi, cartilaginous fish, Irish, 1840, 397; 1852, 292; of North America, 1836, 221; of the seas of China and Japan, 1845, 198.
Elevation and earthquakes, report on the geological theories of, by W. Hopkins, 1847, 33:—
Part I. Sect. I. On the phenomena and theories of volcanos, 33.
Sect. II. On the form, solidification and thickness of the earth's crust, 40.
Part II. On the effects of subterranean forces on the solid crust of the earth, 57.
Sect. I. Theories of elevation, 57.
Sect. II. Vibratory motions of the earth's crust produced by subterranean forces—earthquakes, 74.
Elk, Irish, fossil, Prof. Owen on the, 1843, 237.
Emydidæ, North American, Sir J. Richardson on, 1836, 199.
——, fossil, British, Prof. Owen on, 1841, 160.
Emydosaurii, American, 1836, 200.
Emys testudiniformis, fossil, Prof. Owen on the, 1841, 161.
Enaliosauria, fossil, British, Prof. Owen on the general characters of the order, 1839, 45; characters of the genus Plesiosaurus and Ichthyosaurus, 49, 86, species of the, 126.
——, 1841, 60 (Pliosaurus brachydeirus and P. trochanterius).
Encke's comet, 1831–32, 188.
Endemics, Dr. W. Henry on, 1834, 88.
Engine-governors, marine and stationary, Silver's, 1859, 123.
Engineering, report on the progress of hydraulics as a branch of, by G. Rennie, 1833, 153; 1834, 415.
Engines, water-pressure, 1847, 147; 1848, 11; 1854, 417.
Entomology of Dukhun, Col. Sykes on the, 1837, 252.
——, *vide* Insects.

Entomostraca, Irish, W. Thompson on the, 1843, 269; 1852, 294.
——, British, list of, compiled by R. M'Andrew, 1860, 225.
——, list for local museums, 1855, 120.
Entozoa, Rev. L. Jenyns on the state of our knowledge of the, 1834, 228.
——, Irish, 1843, 275; 1852, 295.
——, British, list of, compiled by R. M'Andrew: — Nematoidea, Trematoda, Acanthocephala, Cestoidea, Cystica, 1860, 229.
Eocene deposits of North America, Prof. H. D. Rogers on the, 1834, 43.
Epidemics, Dr. W. Henry on their general phenomena, and dependence on atmospheric changes, 1834, 90.
Epigene crystals, Prof. Johnston on, 1837, 194.
Equations, Rev. Dr. Peacock on the theory of, 1833, 296; composition of, 296; general solution of, 305; numerical, solution of, 322.
—— of elevated degrees, Sir W. R. Hamilton on Mr. Jerrard's method for transforming and resolving, 1836, 295.
Equatorial mountings, report on the improvement of, by T. Grubb, 1857, 195.
Equisetaceæ, Prof. Henfrey on the reproduction of, 1851, 111, 122.
Equus, fossil, British, Prof. Owen on, 1843, 230.
Erinaceidæ, Irish, 1840, 358.
Erythric acid, Prof. Johnston on, 1831–32, 525.
Esocidæ, Irish, 1840, 391; British, 1844, 302; North American, 1836, 214, 216; of New Zealand, 1842, 25; of the Sea of China, 1845, 264; of the London clay, 1844, 292.
Estuary formations of the Gulf of Mexico, on the, 1834, 13.
Ether, bichlorine, Prof. Johnston on, 1831–32, 519; perchlorine, 519.
——, luminiferous and caloriferous, Rev. Prof. Powell on the density of, 1854, 353.
Etheria, Dr. Carpenter on the structure of the shell of, 1844, 21.
Etherine, the term Etherine=E. proposed for the radical or base of the Ethers, 1831–32, 517.
Ethers, Dr. Daubeny on the nomenclature of the, 1851, 129.
Ethnographical philology, Dr. Latham on the progress of, 1847, 154.
Ethnography, Rev. Dr. J. W. Donaldson on two problems in Indo-German philology, 1851, 138.
Ethnology, a manual of inquiry, being a series of questions concerning the human race, prepared by Dr. Hodgkin and R. Cull, 1852, 243:—
Physical characters, 244.
Language, 246.
Grammar, 247.
Individual and family life, 247.
Ethnology, *continued.*
Buildings and monuments, 249.
Works of art, 249.
Domestic animals, 250.
Government and laws, 250.
Geography and statistics, 250.
Social relations, 251.
Religion, superstitions, &c., 251.
——, a comparative review of philological and physical researches as applied to the history of the human species, by Dr. J. C. Prichard, 1831–32, 529.
——, queries respecting the human race, addressed to travellers, 1840, 447; 1841, 52, 332; 1843, 292; 1844, 93.
——, Dr. Max Müller on the relation of the Bengali to the Arian and Aboriginal languages of India, 1847, 319.
——, on the importance of the study of the Celtic language, by Dr. Meyer, 1847, 301.
——, Dr. J. C. Prichard on the various methods of research which contribute to the advancement of, 1847, 230.
——, Asiatic and African, Dr. C. C. J. Bunsen on the results of the recent Egyptian researches in reference to, 1847, 254.
——, leading points in the history of the philosophy of language, and of its results for, 1847, 257.
——, Prof. Nilsson on the primitive inhabitants of Scandinavia, 1847, 31.
——, on the aboriginal tribes of India, by General John Briggs, 1850, 169.
——, *vide* Philology.
Etrurian language, Rev. Dr. Donaldson on the, 1851, 153.
Eudiometers, experiments with, by Prof. Bunsen and Dr. Playfair, 1845, 142.
Eulimæ of the Ægean Sea, Prof. E. Forbes on the, 1843, 136, 188; Irish, 1843, 254; 1852, 292; British, 1850, 202, 224; 1860, 219; North-east Atlantic, 1856, 125; West coast of N. America, 1856, 335.
Euniciadæ, Dr. T. Williams on the, 1851, 184 *et seq.*
——, British, 1860, 227.
Eupion, Prof. Johnston on, 1831–32, 520, 527.
Explosions in coal-mines and revolving storms, T. Dobson on the relation between, 1855, 1.

Factorial exponentials, Dr. G. Plarr on some transformations of a series of, 1857, 101.
Falconidæ of North America, 1836, 168; of Dukhun, 1837, 248; of Ireland, 1840, 364; 1852, 291.
Fattening of animals, J. B. Lawes and Dr. J. H. Gilbert on the, 1852, 323; 1854, 421.
Fault, relative displacement of stratified beds at a, W. Hopkins on the, 1847, 62.
Fauna of North America, Sir J. Richardson on the, 1836, 121.

Fauna of Ireland, First report on the, by W. Thompson, 1840, 353:—
Part I. General remarks, 353.
Part II. Vertebrata, 358.
Part III. Aves, 364.
Part IV. Reptilia, 383.
Part V. Pisces, 384.
Part VI. Catalogue of the Irish species only, 400.
——, Second report, 1843, 245:—
Div. Invertebrata.
Introduction.
Mollusca, 247.
Cirrhipeda, 265.
Crustacea, 266.
Annelida, 271.
Foraminifera, 274.
Entozoa, 275.
Echinodermata, 279.
Acalepha, 281.
Zoophyta, 282.
Amorphozoa, 286.
Conclusion, 288.
——, Supplementary report, prepared by R. Patterson and J. Garrett, 1852, 290:—
Div. Vertebrata, 291.
Mammalia.
Aves.
Pisces.
Div. Invertebrata, 292.
Mollusca.
Cirrhipeda.
Crustacea.
Annelida.
Foraminifera.
Entozoa.
Echinodermata.
Acalepha.
Zoophyta.
Amorphozoa.
——— of the Ægean Sea, report on the, by Prof. E. Forbes, 1843, 130. *Vide* Mollusca.
——— of the N.E. Atlantic, &c., 1856, 101.
——— of the West coast of N. America, 1856, 159.
——, of the S. and W. coasts of Ireland, report on the, by Dr. E. P. Wright and Prof. J. Reay Greene, 1858, 176.
——, British marine invertebrate, list of, by R. M'Andrew, 1860, 217.
Fazoglo languages, 1847, 202.
Felidæ of North America, 1836, 141; Irish, 1840, 359.
Felis, fossil, British, Prof. Owen on, 1842, 71.
Feloop languages, 1847, 168.
Fens, G. Rennie on the drainage of, 1834, 474.
Fenugreek, used for flavouring cattle food, experiments on the growth of, by Prof. J. Buckman, 1859, 28.
Fermat's theorem, account of, by Prof. H. J. S. Smith, 1859, 233.
Ferns, Prof. A. Henfrey on the reproduction of, 1851, 107, 122.
——, on the influence of carbonic acid on the growth of, by R. Hunt, 1848, 84; by Dr. Daubeny, 1848, 97; 1849, 56; 1850, 159.
Festuca, experiments by Prof. J. Buckman on the growth of the, 1857, 203; 1860, 35.
Fevers, contagious, Dr. W. Henry on, 1834, 69.
Filtration of water, Dr. R. A. Smith on the, 1851, 73.
Fireballs and meteorites, catalogue of, by R. P. Greg, 1860, 48.
Fishermen's life-boats, A. Henderson on the, 1857, 320.
Fishes, Rev. L. Jenyns on the state of knowledge respecting, 1834, 179.
—— of Ireland, W. Thompson on the, 1840, 384, 406; 1852, 291.
—— of North America, Sir J. Richardson on, 1836, 202.
—— of Dukhun, Col. Sykes on, 1837, 251.
—— of New Zealand, Sir J. Richardson on the, 1842, 12.
—— of the coast of England, 1844, 302.
—— of the seas of China and Japan, Sir J. Richardson on the, 1845, 187.
——, freshwater, of Ulster, by W. Thompson, prepared by R. Patterson and J. Garrett, 1852, 290.
——, list of, for the registration of the periodical phenomena of, 1845, 330, 336; 1850, 342.
——, list of, for local museums, by J. Couch, 1855, 113.
——, Prof. Owen on the cranium of, 1846, 178, 206, 211, 214, 230, 237.
——, fossil, of the old red sandstone or Devonian system, report on the, by Prof. Agassiz, 1842, 80; synoptical table of the, 87.
——, fossil, British, synoptical table of, arranged in the order of the geological formations, by Prof. Agassiz, 1843, 194.
——, fossil, of New Jersey, 1834, 61.
——, fossil, of the London clay, report on the, by Prof. Agassiz, 1844, 279; list of, 307.
——, fossil, of Sheppey compared with the fish of the English coast, by Prof. Agassiz, 1844, 302.
——, fossil, in the yellow sandstone of Dura Den, 1860, 32.
Fishing-boats on the coasts of the United Kingdom, A. Henderson on the, 1857, 308.
Fissirostres of North America, 1836, 179, 195; of Dukhun, 1837, 248; of Ireland, 1840, 372; 1852, 291.
Fissurella nubecula, C. W. Peach on the, 1843, 129.
Fissures in the earth's crust, W. Hopkins on the formation of, 1847, 58.
Fistularidæ of North America, Sir J. Richardson on the, 1836, 208, 212.
—— of the China seas, Sir J. Richardson on the, 1845, 247.

Flax plant, report on the composition and economy of the, by Dr. Hodges, 1852, 273:—
History of flax cultivation in Ireland, 273.
The composition of the flax plant, 274.
Account of the processes of cultivation, 274.
An account of the methods of preparing the flax, 277.
Composition of the ash of the flax straw, 286.
Flax cotton, 286.
——, report on, by Dr. Hodges, 1853, 67; 1857, 126:—
Composition of the unsteeped flax stem and of the dressed fibre, 126.
Examination of the steeping process, 129.
—— plant (Linum perenne), Prof. Buckman's experiments on the growth of, 1857, 213; 1859, 22; 1860, 42.
Fluids, report on the analytical theory of hydrostatics and hydrodynamics, by Rev. Prof. Challis, 1833, 131.
I. Motion in pipes and vessels, 135.
II. The velocity of propagation in elastic fluids, 136.
III. Musical vibrations in tubes, 140.
IV. Waves at the surface of water, 142.
V. The resistance to the motion of a ball-pendulum, 149.
——, report on capillary attraction, by Rev. Prof. Challis, 1834, 253.
——, supplementary report on the mathematical theory of, by the Rev. Prof. Challis, 1836, 225–252.
Introduction.
Mechanical theory of the atmosphere, 226.
Theory of the velocity of sound, 233.
Propagation of sound through liquids, 244.
Theories of elastic fluids, 246.
——, on the motions of, through orifices, tubes, artificial channels, canals, and rivers, by G. Rennie, 1833, 153; 1834, 415.
——, report on researches in hydrodynamics, by Prof. Stokes, 1846, 1.
——, *vide* Hydrostatics, Hydrodynamics, and Hydraulics.
Fluoric acid in mineral waters, Dr. Daubeny on, 1836, 19.
Fogs, dry, Prof. J. D. Forbes on the blood-red colour of, 1840, 122.
Fomites, Dr. W. Henry on, 1834, 79.
Food, on the processes employed in the nutrition and reproduction of various parts of the animal economy, by Prof. Liebig, 1842, 42.
—— for cattle, on the growth of fenugreek, used for flavouring the, 1859, 28.
——, on the composition of, in relation to respiration and the feeding of animals, by J. B. Lawes and Dr. J. H. Gilbert, 1852, 323.
Food, on the equivalency of starch and sugar in, by J. B. Lawes and Dr. J. H. Gilbert, 1854, 421.
Foraminifera, Irish, W. Thompson on, 1843, 274; 1852, 295.
—— of Belfast Bay, Prof. Williamson on the, 1857, 237.
——, British, list of, 1860, 234.
Forests, tropical, report of committee on the effects in an economical and physical point of view of the destruction of, 1851, 78.
—— of India, on the, 1851, 79.
Formations of the earth, Prof. Forchhammer on the influence of fucoidal plants on the, 1844, 155.
Formic acid in mineral waters, 1836, 29.
Fossil and recent conchology at the British Museum, report by the Marquis of Northampton on, 1840, 443.
—— fishes of the old red sandstone, or Devonian system, on the, 1842, 80; synoptical table of the species, by Prof. Agassiz, 87.
—— fishes, British, arranged in the order of the geological formations, by Prof. Agassiz, 1843, 194.
—— fishes of the London clay, Prof. Agassiz on the, 1844, 279; list of species, 307.
—— fishes of the Dura Den yellow sandstone, 1860, 32.
—— Echinodermata, oolitic, Dr. T. Wright on the, 1856, 396–404.
—— mammalia of North America, Prof. H. D. Rogers on the, 1834, 23; Sir J. Richardson on the, 1836, 159.
—— mammalia, British, report on, by Prof. Owen, 1842, 54; 1843, 208.
—— mammals of Australia, Prof. Owen on the, 1844, 225.
—— ornithology, Prof. H. E. Strickland on, 1844, 209.
—— remains of extinct animals, Rev. W. Conybeare's report on, 1831–32, 402.
—— remains taken in the dredge, Prof. E. Forbes on, 1850, 247.
—— reptiles, British, report on, by Prof. Owen, 1839, 43; 1840, 443; 1841, 60.
—— and recent reptilia, Prof. Owen on the orders of, and their distribution in time, 1859, 153.
Fossils of N. America, Prof. H. D. Rogers on, 1834, 35–64.
—— obtained by Mr. Slimon in the upper Silurians of Lesmahago, Lanarkshire, 1859, 63.
——, Astorian, list of, 1856, 367.
Foster's anemometer, 1844, 250.
Fourier's (M.) hypothesis of the conduction of heat, 1841, 9.
Foxes, American, 1836, 146; Irish, 1836, 359.

Fraunhofer's refractive indices, 1839, 6.
Fredericella, Prof. Allman on the polyzoon, 1850, 306, 336.
Fresnel's theory of reflexion, Rev. Dr. Lloyd on, 1834, 367.
—— theory of double refraction, Rev. Dr. Lloyd on, 1834, 382.
Friction, P. Erman on the influence of, upon thermo-electricity, 1845, 102.
Fringillidæ, North American, 1836, 174; of Dukhun, 1837, 249; Irish, 1840, 369; 1852, 291.
Fromondi (L.) on earthquakes, 1850, 11.
Fucoid schists, metamorphosed, in Scandinavia, Prof. Forchhammer on the, 1844, 155.
Fuel, report on the consumption of, and the prevention of smoke, by W. Fairbairn, 1843, 294; 1844, 100–120:—
I. The constituents of coal and other fuels, 100.
II. The relative proportions of the furnaces and the forms of boilers, 103.
III. The temperature of the furnace and the surrounding flues, 106; pyrometer, 107.
IV. The economy of fuel, concentration of heat, and prevention of smoke, 110; improved stationary boiler, 115.
General summary of results, 116; appendix, 118.
Fulah languages, 1847, 188.
Functions, algebraical, R. L. Ellis on the theory of the integrals of, 1846, 35.
Furnace, W. Fairbairn on the consumption of fuel and the prevention of smoke, 1844, 100, 118.
——, hot-blast, theory of the, 1845, 168.
Furnace-gases, Prof. Bunsen and Dr. Lyon Playfair on, 1845, 142.
—— gases, on the advantageous use made of the, at the Ystalyfera iron-works, by J. P. Budd, 1848, 75.
Fusus of the Ægean Sea, 1843, 139, 190; Irish, 1843, 257; South European, 1850, 267; North-east Atlantic, 1856, 131; West coast of North America, 1856, 343; British, 1850, 204, 227; 1860, 218.

Gaboon languages, 1847, 174.
Gadidæ, Irish, 1840, 393; British, 1844, 302.
—— of the China and Japan seas, Sir J. Richardson on the, 1845, 320.
—— of New Zealand, Sir J. Richardson on the, 1842, 26.
—— of North America, Sir J. Richardson on the, 1836, 217, 218.
—— of the London clay, Prof. Agassiz on, 1844, 294, 308.
Galapagos shells, list of, 1856, 359.
Galeidæ of the sea of Japan, Sir J. Richardson on the, 1845, 194.
Galla languages, 1847, 205, 209.
Gallic acid, process for obtaining, 1831–32, 503.
Galvanic experiments to determine the existence or non-existence of electrical currents among stratified rocks, particularly those of the mountain-limestone formation, by H. L. Pattinson, 1839, 23.
Galvanometer (Gourjon's) at the Kew observatory, on the, 1844, 124; 1851, 336.
Gammaridæ, British, C. Spence Bate on the, 1855, 57.
Ganocephala, fossil, Prof. Owen on the, 1859, 155.
Ganoidæ of the Devonian system, by Prof. Agassiz, 1842, 87; 1843, 194.
of the Carboniferous system, 1843, 197.
of the Permian system, 198.
of the Triassic system, 199.
of the Oolitic system, 201.
of the Cretaceous system, 204.
of the Tertiary system, 206.
(types récents) of the London clay, M. Agassiz on the, 1844, 303; (types anciens), 308.
Garanceux, Dr. Schunck on the article known in commerce as, 1848, 59.
Garancin, a preparation of madder, Dr. Schunck on, 1848, 74.
Gas-furnace for experiments on vitrifaction and other applications of high heat in the laboratory, Rev. W. V. Harcourt on a, 1844, 82.
Gases and vapours, Dumas's researches on the density of, 1831–32, 421.
——, physical relations of the, Prof. Johnston on, 1831–32, 447.
——, condensation of the, Prof. Johnston on, 1831–32, 450.
—— evolved from springs, Dr. Daubeny on, 1836, 36.
—— present in small quantities in atmospheric air, coal-gas, &c., W. West on a machine for the detection and measurement of, 1838, 316; 1839, 171.
—— evolved from iron-furnaces, with reference to the theory of the smelting of iron, report on the, by Prof. Bunsen and Dr. Lyon Playfair, 1845, 142; their application to practical purposes, 179.
—— from the blast-furnaces at the Ystalyfera iron-works, J. P. Budd on the advantageous use made of the, 1848, 75.
Gasteropoda, Rev. L. Jenyns on the state of our knowledge of the, 1834, 223.
——, list of, for local museums, 1855, 114.
—— of the Ægean Sea, Prof. E. Forbes on, 1843, 132, 136, 156, 158, 160, 162, 164, 165, 167, 169, 186.
—— of the North-east Atlantic, &c., R. M'Andrew on the, 1856, 115, 144.
——, Irish, 1843, 249; 1852, 292; 1857, 106–110, 225.
——, microscopic structure of the shells of, Dr. W. B. Carpenter on the, 1847, 107, 116.
——, British, table of depths, &c. at which

species were taken, Prof. E. Forbes on, 1850, 200, 220, 260.
Gasteropoda of the West coast of North America, P.P. Carpenter on the, 1856, 312.
—— Prosobranchiata, British, list of, compiled by R. M'Andrew, 1860, 218.
—— Opisthobranchiata, British, list of, compiled by R. M'Andrew, 1860, 219.
—— Nudibranchiata, British, list of, 1860, 220.
Gastric juice, its action on food, 1842, 50.
Gauging of water by triangular notches, reports on the, by Prof. J. Thomson, 1856, 46; 1858, 181; 1860, 217.
Gaussian constants, A. Erman on the calculation of the, 1846, 92; 1847, 377; 1848, 98.
Gay-Lussac on earthquakes, 1850, 23.
Geckotidæ, North American, 1836, 200.
Geography, physical, of North America, Prof. H. D. Rogers on the, 1834, 1; Sir J. Richardson on the, 1836, 123.
Geological science, report on the progress, state, and prospects of, by the Rev. W. D. Conybeare, 1831–32, 365; palæontology, 402.
—— section across Europe, from the North of Scotland to the Adriatic, 1831–32, 413.
—— sections of railway cuttings, report of the committee on, 1841, 331; 1842, 38; 1843, 295.
—— phenomena, Rev. W. V. Harcourt's report on the effects of long-continued heat, illustrative of, 1860, 175.
—— theories of elevation and earthquakes, W. Hopkins on the, 1847, 33.
Geology of North America, report on the, by Prof. H. D. Rogers, 1834, 1–66:—
Physical geography, 1.
Geology of the United States, 6.
Volcanic action, 7.
Alluvial deposits, 8.
Recent changes in the Mississippi, 9.
Alluvial terraces, 10.
Of the coast islands and their probable origin, 11.
Raised estuary formations of the Gulf of Mexico, 13.
Diluvial action over North America, 14.
Ancient alluvium, 18.
Fossil mammalia of the United States, 23.
Localities of fossil mammalia, 25.
Tertiary formations, 29.
Synoptical table of recent and tertiary formations of the United States, 30.
Newer pleiocene of St. Mary's county, Maryland, 33.
Formations of the older pleiocene and meiocene periods, 35.
Geographical range of the older pleiocene and meiocene formations, 36.
Older tertiary, or eocene, 43.
Steps in the history of the tertiary formations of the United States, 49.
Geology of N. America, *continued*.
Cretaceous formations, 50.
Calcareous formations, 51.
Ferruginous sands of New Jersey, &c., 52.
Nummulite limestone, 59.
Organic remains discovered in New Jersey, Delaware, and Alabama, 61.
—— of Dukhun, Col. Sykes on the, 1837, 219; ghâts, 220; valleys, 221; terraces and escarpments, 222; basalt, 223; dykes, 224; ferruginous clay, 224; limestone, 225, 230; loose stones, 226; rocky heaps, 226; sheets of rock, 226; trap rocks, 227; minerals, 229; natural salts, 229; ores, 229; organic remains, 229; thermal springs, 230; extent of trap region, 230; laterite, 230; granite, 230; sedimentary rocks, 231.
——, *vide* Earth's crust, Fossils, Palæontology, Rocks, &c.
Geometrical interpretation of the algebraic couple, Dr. C. J. Hargreave on the, 1857, 185.
—— origin of logarithms, Rev. Dr. Booth on the, 1856, 68.
Gerhardt's classification of chemical substances, 1859, 1.
Girders and suspension chains, P. W. Barlow on the mechanical effect of combining, 1857, 238.
——, wrought-iron, experiments to determine the effect of vibratory action and long-continued changes of load upon, by W. Fairbairn, 1860, 45.
Glairine in mineral waters, Dr. Daubeny on, 1836, 30.
Glands, &c. of the human body, report of committee on the analysis of the, 1837, 139, 149.
Globes and cylinders, glass, W. Fairbairn on the collapse of, 1858, 174.
Glories, &c., Prof. J. D. Forbes on the phenomenon of, 1840, 137.
Glycera, Dr. T. Williams on the, 1851, 174, 198, 214, 235.
Glycerides, Dr. Daubeny on the, 1851, 131.
Glycerine, 1859, 2, 5.
Glyptolæmus Kinnairdii, of the Dura Den yellow sandstone, 1860, 33.
Glyptolepis leptopterus, fossil, Prof. Agassiz on, 1842, 87; G. elegans, 87.
Gneiss from Bugten, analysis of, by Prof. G. Forchhammer, 1844, 168.
Goat, fossil remains of, Prof. Owen on the, 1843, 236.
Gobioidæ of North America, Sir J. Richardson on the, 1836, 207, 211.
—— of Ireland, 1840, 388; British, 1844, 302.
—— of New Zealand, Sir J. Richardson on the, 1842, 22.
—— of the China seas, Sir J. Richardson on the, 1845, 204, 318, 319.
Goitre, Dr. Daubeny on the cause of, 1836, 46.

Gonga languages, 1847, 206.
Goniasteridæ, oolitic, 1856, 402.
Goniodoris of the Ægean Sea, Prof. E. Forbes on the, 1843, 133, 186.
Goniopholis crassidens, fossil, Prof. Owen on the, 1841, 69.
Gordius, Dr. T. Williams on the genus, 1851, 243.
Grallatores of North America, 1836, 182, 196; of Dukhun, 1837, 250.
—— of Ireland, W. Thompson on the, 1840, 374; 1852, 291.
Grasses of Dukhun, Col. Sykes on the, 1837, 244.
——, experiments on the growth of the, by Prof. Buckman, 1857, 201; 1859, 29; 1860, 35.
Greenstone dykes, Prof. Phillips on the occurrence of structures analogous to cleavage near, 1856, 394.
Greenwich lunar and planetary observations, G. B. Airy on the reductions of the, 1838, 315; 1840, 423.
Growth of plants. *Vide* Plants.
Gums, arabine, bassorine, and cerasine, on the, 1831–32, 511.
——, resinous substances, stearoptes, &c., list of, 1831–32, 516.
Guns, metals for, report of a committee on, 1855, 100.
Gymnodontidæ, Irish, W. Thompson on the, 1840, 396; 1852, 292.
—— of North America, Sir J. Richardson on the, 1836, 220.
—— of the seas of China and Japan, 1845, 199; British, 1844, 303.

Hæmadynamometer, Poiseuille's, 1840, 412.
Hæmulonidæ of the China and Japan seas, Sir J. Richardson on the, 1845, 226.
Halcyonidæ, North American, Sir J. Richardson on, 1836, 179.
—— of North America, 1836, 179; of Dukhun, 1837, 248; of Ireland, 1840, 372.
Haliotis, microscopic structure of the shell of the, Dr. Carpenter on the, 1844, 12; 1847, 114, 133.
Halley's comet, 1831–32, 164.
Halos and parhelia, Prof. J. D. Forbes on, 1840, 130.
Hansteen's Magnetismus der Erde, on the phenomena of terrestrial magnetism, an abstract of, by General Sabine, 1835, 61.
Hare of North America, 1836, 157; of Ireland, 1840, 361.
Head, account of the synonyms of the bones of the, according to their general homologies, by Prof. Owen. *Table* III. 1846, 339.
Heart, report on the motions and sounds of the, by the Dublin sub-committee, 1835, 243–250:—
Experiments on the motions of the heart, 243.
Heart, *continued*.
Experiments on the sounds of the heart, 246.
Conclusions respecting the motions of the heart, 248.
Conclusions respecting the sounds of the heart, 249.
——, Second report by the Dublin sub-committee, 1836, 275.
——, report by the London sub-committee, 1836, 261.
——, Second report by the London sub-committee, 1837, 155:—
Experiments on the production of sound by the motion of water through tubes, 156.
Experiments on the production of murmurs in the living body, 159.
—— experiments performed at King's College and the Marylebone Infirmary, 1840, 163, 173.
Conclusions from both series for 1838–39 and 1839–40, 203.
——; Prof. W. Clark on the, 1834, 134; cause of the action of the, 137.
Heat, Rev. Dr. Whewell's report on the mathematical theories of, 1835, 1–17:—
1. Experimental principles, 17.
2. Fundamental analytical equations, 19.
3. Solution of the equations, 24.
4. Applications of the solutions, 30.
a. Motion of heat in the earth, 30.
b. Central heat, 31.
c. Cosmical heat, 32.
——, central, Dr. Daubeny on the theory of, 1836, 69.
——, report by Rev. Prof. Kelland on the state of theoretical and experimental knowledge of the laws of conduction of, 1841, 1–25:—
I. On the theoretical knowledge of the phenomena of conduction, 2.
II. The extent theory has been tested by experiment, 15.
III. The inadequacy of the few experimental facts with which we are furnished, to serve either as the basis of a true theory or as the indication of a false one, 22.
——, Prof. J. D. Forbes on the laws of the conduction of, 1852, 260.
—— governor (the thermostat), Dr. A. Ure on the, 1833, 419.
——, experiments on, by Cavendish, 1839, 45.
——, influence of surface and colour on radiation, Rev. Prof. Powell on the, 1831–32, 265; 1840, 17; 1854, 337.
——, R. Mallet on its action, when long-continued, on inorganic and organic substances, 1838, 312.
——, Prof. C. Langberg on the relation which exists between the development of, and the coincident contraction of volume in sulphuric acid when mixed with water, 1847, 1.

SPECIAL LIBRARY OF THE UNIVERSITY OF CALIFORNIA

Heat of combination, report on the, by Dr. T. Andrews, 1849, 63:—
The thermal changes which accompany solution, 63.
Combination of sulphuric acid with water, 67.
—— of acids and bases, 68.
Chloride of barium and sulphate of magnesia, 71.
—— of barium and sulphate of soda, 72.
—— of barium and sulphate of zinc, 72.
—— of barium and protosulphate of iron, 72.
—— of barium and sulphate of copper, 72.
—— of barium and sulphate of ammonia, 72.
Nitrate of barytes and sulphate of magnesia, 72.
—— of barytes and sulphate of soda, 73.
—— of barytes and sulphate of zinc, 73.
—— of barytes and sulphate of copper, 73.
Acetate of lead and sulphate of magnesia, 73.
—— of lead and sulphate of soda, 73.
Acetate of lead and sulphate of zinc, 73.
Chloride of barium and sulphuric acid, 74.
Nitrate of barytes and sulphuric acid, 74.
Acetate of barytes and sulphuric acid, 74.
—— of barytes and oxalic acid, 74.
Acetate of lead and sulphuric acid, 74.
Nitrate of lead and sulphuric acid, 74.
Acetate of lead and oxalic acid, 74.
Solution of metals in nitric acid, 74.
—— of zinc in nitric acid, 75.
—— of copper in nitric acid, 75.
Metallic substitutions, 76.
Combustions in oxygen gas, 76.
—— in chlorine gas, 77.
—— of bromine and iodine, 78.
——, atmospheric, Prof. J. D. Forbes on, 1840, 76.
——, radiant, Rev. Prof. Powell's report on the state of our knowledge of the science of, 1831–32, 259–301:—
Div. 1. Radiation of heat from hot bodies below the temperature of luminosity, 259.
Div. 2. Terrestrial luminous hot bodies, 274.
Div. 3. Heat of the sun's rays, 283.
Conclusion, 296.
——, radiant, supplementary report on the progress of discovery relative to, by the Rev. Prof. Powell, 1840, 1–36:—
Div. 1. Unpolarized heat:
Transmission and refraction of heat, 2, 7.
Reflexion of heat, 10.
Heat, *continued.*
Analogies of light and heat, 10.
New phenomena of transmission, 11.
Radiation of heat, 13.
Influence of surface and colour on radiation, 17.
Repulsive power of heat, 20.
Formation of ice, 26.
Div. 2. Polarized heat:
Polarization of heat, 21.
Circular and elliptical polarization of heat, 23.
Polarization of heat from different sources, 25.
Equal polarizability of heat from different sources, 28.
Unequal polarizability of heat from different sources, 30.
Intensity of reflected heat, 32.
Conclusion, 33.
——, radiant, third report on, by the Rev. Prof. Powell, 1854, 337:—
Preliminary remarks, 337.
On the theoretical explanation of some former experiments, 340.
Theoretical refraction of heat, 341.
Transmission of heat through crystals, 348.
Analogies of transmission of light and heat by waves, 351.
Origin of the solar heat, Prof. W. Thomson's theory, 352.
Density of æther, 353.
Radiation of heat from the zodiacal light, and from the comet of 1843; 1854, 354.
——; Dr. Whewell on the mathematical theories of, 1835, 17.
——, Dr. Hudson on the phenomena usually referred to the radiation of, 1835, 163.
——, on its decrease above the surface of the earth, by Prof. J. D. Forbes, 1831–32, 218.
——, report on a gas-furnace for experiments on vitrifaction and other applications of high heat, by Rev. W. V. Harcourt, 1844, 82.
——, long-continued, report on the effects of, illustrative of geological phenomena, by Rev. W. V. Harcourt, 1860, 175.
Heights, Prof. J. D. Forbes on the application of the barometer to the measurement of, 1831–32, 236.
Helicidæ, British and foreign, Prof. E. Forbes on, 1839, 142.
——, Irish, 1843, 252.
—— of the West coast of North America, 1856, 314.
Hemicidaridæ, oolitic, Dr. T. Wright on, 1856, 399, 400.
Henley electrometer at the Kew observatory, 1844, 124.
Hepaticæ, Prof. A. Henfrey on the reproduction of, 1851, 106.
Herbarium, typical, list of objects for local museums, 1855, 123, 124.

Heteropoda of the West coast of N. America, P. P. Carpenter on the, 1856, 316.
Heterosomata of the China and Japan seas, Sir J. Richardson on the, 1845, 277.
Hindûs, General Briggs on the, 1850, 169.
Hippopotamus, fossil, British, Prof. Owen on the, 1843, 223.
Hirundinidæ of North America, 1836, 179, 195; of Dukhun, 1837, 248; Irish, 1840, 372; 1843, 272; 1852, 291.
Histoire Céleste, reports on the reduction of Lalande's stars in the, 1838, 316; 1839, 174; 1840, 426; 1841, 330; 1842, 205; 1845, 339; 1847, 379.
Hog, fossil, British, Prof. Owen on the, 1843, 228.
——, skull of the, Prof. Owen on the, 1846, 297.
Holoptychius, fossil, Prof. Agassiz on, 1842, 87; 1843, 195, 198.
——, fossil, Prof. Huxley on the structure and figure of the genus, 1860, 32.
Holothuriadæ of Ireland, W. Thompson on the, 1843, 279; 1852, 295.
—— of the Ægean Sea, Prof. E. Forbes on the, 1843, 149, 151.
——, Dr. Carpenter on the structure of the shell of, 1847, 127.
——, British, 1860, 230.
Homoiomorphism, Prof. Johnston on, 1831–32, 429.
Homologies of the vertebrate skeleton, Prof. Owen on the, 1846, 169.
—— of the Amphipoda, by C. Spence Bate, 1855, 24.
——, *vide* Vertebrate skeleton.
Hooke's discourses of earthquakes, R. Mallet on, 1850, 15.
Hornblende and augite, on, 1831–32, 486.
Horse, fossil remains of, British, Prof. Owen on the, 1843, 230.
Hot-blast furnaces, Prof. Bunsen and Dr. Lyon Playfair on the theory of the, 1845, 168.
Hot springs, hints for observations of the temperature of, by Prof. J. D. Forbes, 1840, 152.
Hottentot language, 1847, 196, 228.
Houldsworth's pyrometer, W. Fairbairn on, 1844, 107, 109.
Howssa languages, 1847, 185.
Human anatomy, Prof. Owen on the nomenclature of, 1846, 169.
—— cranium, Prof. Owen on the homologies of the, 1846, 188, 300.
—— body, report of committee on the analysis of the glands, &c. of the, by Dr. G. O. Rees, 1837, 149.
—— embryo, Prof. Owen on the skull of the, 1846, 197.
—— knowledge and discovery, table of some of the men and events upon which its progress have depended, 1858, 104.
—— race, varieties of the, queries addressed to travellers, 1840, 447; 1841, 52, 332; 1843, 292; 1844, 93.
Human race, on the various methods of research which contribute to the advancement of the knowledge of the, 1847, 230.
—— race, review of philological and physical researches as applied to the history of the, by Dr. J. C. Prichard, 1831–32, 529.
—— race, account of the attempts made to classify them by their physical character, 1831–32, 534.
—— race, General Briggs on the aboriginal tribes of India, 1850, 169.
—— race, manual of ethnological inquiry, by Dr. Hodgkin and R. Cull, 1852, 243.
Humidity, Prof. J. D. Forbes on, 1831–32, 239; 1840, 95.
Hutton's theory of mineral veins, 1833, 10.
Hyæna, fossil, British, Prof. Owen on the, 1842, 71.
Hydraulic machinery, on its application to cranes, &c., by Sir W. G. Armstrong, 1854, 417.
Hydraulics, as a branch of engineering, G. Rennie's report on the progress of, 1833, 153:—
Statement of the fundamental problem and modification of the law of Torricelli, 153.
Researches of foreign philosophers, 155.
Researches of British philosophers, 179.
Part 2. 1834, 415–512:—
Introduction.
On the mean velocity of water running in artificial canals, 424.
On the progress of our knowledge of rivers, 425.
Progress of hydraulics in France, Germany, and England, 447.
Progress of hydraulic engineering in England with reference to rivers, canals, and drainage, 473.
——, *vide* Fluids, Hydrodynamics, and Hydrostatics.
Hydriodate of phosphuretted hydrogen, Prof. Johnston on, 1831–32, 464.
Hydrobromate of phosphuretted hydrogen, Prof. Johnston on, 1831–32, 464.
Hydrocarbons, Dr. Daubeny on the nomenclature of the, 1851, 126.
Hydrochloric acid, J. Blake on its effects when injected into the veins, 1845, 84.
Hydrodynamics and hydrostatics, Rev. Prof. Challis's report on, 1833, 131; 1834, 253; 1836, 225.
——, report on researches in, by Prof. G. G. Stokes, 1846, 1:—
I. General theorems connected with the ordinary equations of fluid motion, 2.
II. Theory of waves, including tides, 3.
Theory of long waves.
Theory of oscillatory waves.
Theory of solitary waves.
Theory of river and ocean tides.
III. The discharge of gases through small orifices, 13.
IV. Theory of sound, 14.

Hydrodynamics, *continued.*
V. Simultaneous oscillations of fluids and solids, 15.
VI. Formation of the equations of motion when the pressure is not supposed equal in all directions, 16.
——, *vide* Hydraulics and Waves.
Hydrogen, basifying power of, Prof. Johnston on, 1831–32, 452.
—— gas, Prof. Johnston on, 1831–32, 452.
——, carburetted, evolved from springs, Dr. Daubeny on, 1836, 42.
——, persulphuretted, Prof. Johnston on, 1831–32, 454.
——, phosphuretted, Prof. Johnston on, 1831–32, 456.
——, phosphuretted, muriate, hydriodate, and hydrobromate of, Prof. Johnston on, 1831–32, 464.
——, sulphuretted, its action on nitric acid, Prof. Johnston on, 1831–32, 460.
——, sulphuretted, evolved from springs, Dr. Daubeny on, 1836, 36, 42, 73.
Hydrostatics and hydrodynamics, Rev. Prof. Challis's report on the analytical theory of, 1833, 131–151:—
1. Motion in pipes and vessels.
2. Velocity and propagation in elastic fluids.
3. Musical vibrations in tubes.
4. Waves at the surface of water.
5. Resistance to the motion of a ball-pendulum.
—— and hydrodynamics, report on the theory of capillary attraction, by Rev. Prof. Challis, 1834, 253.
——, supplementary report on the mathematical theory of fluids, by Rev. Prof. Challis, 1836, 225:—
Mechanical theory of the atmosphere, 226.
Theory of the velocity of sound, 233.
Propagation of sound through liquids, 244.
Theories of elastic fluids, 246.
——, *vide* Hydrodynamics, Hydraulics.
Hydrozoa, British, list of, compiled by R. M'Andrew, 1860, 232; Corynidæ, Sertularidæ, Calycophoridæ, Physophoridæ, 232; Medusidæ, Lucernaridæ, 233.
——, Irish, 1843, 283; 1857, 235; 1858, 287.
Hygrometer for use in a balloon, on the, 1841, 58.
—— and aspirator, improved, 1851, 343.
Hygrometers, Prof. J. D. Forbes on, 1831–32, 240; 1840, 95.
—— of the Kew observatory, 1844, 128; 1849, 81; 1851, xxviii, 341, 365.
Hygrometric sliding rule, on a, 1851, 345.
Hygrometry, Prof. J. D. Forbes on, 1831–32, 239; 1840, 95.
Hylæosaurus, fossil, British, Prof. Owen on, 1841, 111; 1859, 164.
Hyoscyamin, Prof. Johnston on, 1831–32, 509.
Hyperina, British, C. Spence Bate on the, 1855, 59.
Hyposulphite of barytes, Prof. Johnston on, 1831–32, 481.
Hyposulphurous acid, Prof. Johnston on, 1831–32, 461.
Hyracotherium, fossil, British, Prof. Owen on, 1843, 226.

Ibu language, 1847, 171.
Icarus of the Ægean Sea, Prof. E. Forbes on the, 1843, 134, 187.
Ice, specific gravity of, 1831–32, 454.
——, formation of, in reference to the theory of radiant heat, 1840, 20.
Ichthyology of New Zealand, report on the, by Sir J. Richardson, 1842, 12.
—— of the seas of China and Japan, report on the, by Sir J. Richardson, 1845, 187.
——, *vide* Fishes.
Ichthyopterygia, Prof. Owen on the, 1859, 159.
Ichthyosaurus, Prof. Owen on the characters of the genus, 1839, 86.
I. communis, 108.
I. intermedius, 110.
I. platyodon, 112.
I. lonchiodon, 116.
I. tenuirostris, 117.
I. acutirostris, 121.
I. latifrons, 122.
I. latimanus, 123.
I. thyreospondylus, 124.
I. trigonus, 124.
Iguanidæ, American, 1836, 200.
Iguanodon Mantelli, Prof. Owen on, 1841, 120.
Impact upon beams, Prof. E. Hodgkinson on, 1835, 93–116:—
Conclusions from experiments, &c., 93.
Experiments:—
Horizontal impacts, 106.
Vertical impacts, 112.
Impact on bodies sustained by wires, 115.
Imports, report on the animal and vegetable products imported into Liverpool from 1851 to 1855, by Prof. T. C. Archer, 1857, 254.
——, animal, vegetable, and mineral products imported into the Clyde from 1853 to 1857, report on, by M. Connal and W. Keddie, 1858, 185.
Inclinometer, Prof. Lloyd's, 1842, 8.
——, inductive, Weber's, 1842, 9.
——, Lamont's, 1842, 9.
Indicator, constant, for steam-engines, 1841, 307; 1842, 98.
Watt's, 1841, 308.
Morin's compteur, 1841, 308.
Prof. Moseley's, 1841, 310.
Theory of the, 1841, 314; the springs, 317; friction of the pistons, integrating wheel, &c., 320; formulæ for determining the work of an engine, 323.

Indo-European languages, 1847, 241, 261.
Indo-German philology, Rev. Dr. Donaldson on two problems in, 1851, 138.
Induction, experiments on, by atmospheric electricity, at the Kew observatory, 1844, 140.
——, photochemical, Prof. Bunsen and Dr. H. E. Roscoe on, 1856, 65.
Industrial Feeding-schools, Aberdeen, A. Thomson's report on the, 1859, 44.
Inferobranchiata of the Ægean Sea, Prof. E. Forbes on the, 1843, 133, 134, 187.
—— of Ireland, 1843, 251.
Infinite angles, Dr. C. J. Hargreave on, 1857, 188.
Infraorbital cavities in deers and antelopes, Prof. Jacob on the, 1855, 208.
Infusoria, Rev. L. Jenyns on the state of our knowledge of the, 1834, 242.
Inoculation, Dr. W. Henry on, 1834, 73.
Inorganic chemistry, report on, by Prof. Johnston, 1831–32, 447, 487.
—— substances, R. Mallet on the action of long-continued heat on, 1838, 313.
Insectivora (Ord. Carnivora) of North America, Sir J. Richardson on the, 1836, 140.
——, fossil, British, Prof. Owen on the, 1842, 57.
Insects, Rev. L. Jenyns on the state of our knowledge of, 1834, 205.
—— of Dukhun, Col. Sykes on, 1837, 252.
—— of Ireland, 1843, 290.
——, list of, selected for observation of periodical phenomena, 1845, 336; 1850, 343.
Insessores of North America, 1836, 170, 192, 193; of Dukhun, 1837, 248; of Ireland, 1840, 366; 1852, 291.
Insulation, experiments on, at the Kew observatory, 1844, 138.
——, external apparatus for, 1851, 340.
Insulators, comparative insulating powers of, 1844, 135, 136, 137.
Invertebrata, Rev. L. Jenyns on the state of knowledge of the, 1834, 218.
——, marine, report on the infralittoral distribution of, on the southern, western, and northern coasts of Great Britain, by Prof. E. Forbes, 1850, 192.
—— of the Ægean Sea, Prof. E. Forbes on the, 1843, 130.
—— of the North-east Atlantic, &c., R. M'Andrew on the, 1856, 115.
—— of the West coast of North America, 1856, 312.
——, South European, R. M'Andrew on, 1850, 264.
—— of Ireland, 1843, 245; 1852, 292; 1857, 106; 1858, 178.
——, British marine, list of the, by R. M'Andrew, 1860, 217.
——, *vide* Dredging.
Iodate of soda, mode of preparing, 1831–32, 480.
Iodic acid, Prof. Johnston on, 1831–32, 466.
Iodic acid, Dr. J. Blake on its effects when injected into the veins, 1845, 83.
Iodine and bromine, heat of combination of, Dr. T. Andrews on, 1849, 78.
—— and bromine in salt springs, 1836, 16.
—— and chlorine, oxides of, Prof. Johnston on, 1831–32, 465.
Iridium, salts of, on their action when introduced into the blood, 1846, 27.
Iron, P. Barlow on the mean strength and elasticity of, 1833, 96–103.
——, corrosion of, R. Mallet on the, 1838, 253; 1840, 221; 1843, 1.
——, on paints and varnishes to prevent the corrosion of, 1838, 287; 1840, 238; 1843, 19, 23.
—— manufacture in Great Britain, G. R. Porter on the progress of, 1846, 99–119.
——, slags produced in the smelting and manufacture of, Dr. Percy on the, 1846, 351.
——, on certain anomalous conditions in castings when produced from the same iron in successive meltings, by W. Fairbairn, 1853, 87.
——, smelting of, report on the gases evolved from furnaces, with reference to the theory of the, by Prof. Bunsen and Dr. L. Playfair, 1845, 142.
—— works, Ystalyfera, on the advantageous use made of the gaseous escape from the blast-furnaces of, by J. P. Budd, 1848, 75.
——, the contact of oak and all timbers which contain tannic or gallic acids injurious to, 1843, 17.
——, cast, W. Fairbairn on the strength and other properties of, 1837, 377; 1842, 88.
——, cast, Prof. E. Hodgkinson on the strength and other properties of, 1837, 337.
——, cast, experiments on the ultimate transverse strength of, 1838, 312.
——, cast, by the cold and hot blast, Prof. T. Thomson on the difference in the composition of, 1837, 117.
——, cast, analyses of, 1843, 4.
——, cast, on the resistance of, derived from repeated meltings, to the force of compression, by W. Fairbairn, 1853, 109.
——, wrought and cast, and steel, reports of experiments upon the action of air and water on, by R. Mallet, 1838, 253; 1840, 221; 1843, 1.
——, wrought, W. Fairbairn on the tensile strength of, at various temperatures, 1856, 405; on the tensile strength of rivet-iron, 415.
——, R. Mallet on railway bar corrosion, 1843, 28; 1849, 88.
—— beams, impact upon, 1835, 93.
—— girders, wrought, on the effect of vibratory action and long-continued changes of load upon, 1860, 45.
—— guns, on, 1855, 100.
—— ships, on the corrosion of, 1843, 14.
—— ships, injurious effect of oak timber, &c., in, 1843, 17.

Iron, rivet-, W. Fairbairn on the tensile strength of, 1856, 415.
——, carburets of, Prof. Johnston on, 1831–32, 478.
——, peroxalate of, Prof. Johnston on the action of light upon, 1831–32, 482.
——, submuriate of, 1831–32, 483.
—— with silica, and muriatic acid, in mineral waters, 1836, 14, 15.
——, protosulphate of, and chloride of barium, heat of combination of, Dr. T. Andrews on the, 1849, 72.
—— ore of Dukhun, 1837, 229.
——, meteoric, phosphorus in, 1849, 33.
Irrigation in Dukhun, Col. Sykes on, 1837, 272.
Isoclinal lines, or lines of equal magnetic dip, corresponding to the years 1600, 1700, and 1780; 1835, 67.
—— and isodynamic lines in Ireland, on the, 1835, 150.
—— and isodynamic lines in the British Islands, General Sabine's memoir on the, 1838, 49.
Isodimorphism, Prof. Johnston on, 1831–32, 433; 1837, 168.
Isoëtaceæ, Prof. Henfrey on the reproduction of, 1851, 114.
Isogenic lines, or lines of equal magnetic variation, corresponding to the years 1600, 1700, 1744, and 1787; 1835, 62.
Isomerism, Prof. Johnston on, 1831–32, 434; isomeric bodies, 436.
Isomorphism of potash and ammonia + two atoms of water, Prof. Johnston on the, 1831–32, 431.
——, Rev. Dr. Whewell on, 1831–32, 344.
——, on the relation of dimorphism to, by Prof. Johnston, 1837, 209.
——, use of, in determining the compositions of oxides, &c., by Prof. Johnston, 1831–32, 422; 1837, 179; its application to mineral compounds, 1831–32, 424.
Isomorphous bodies, list of, by Prof. Johnston, 1831–32, 425.
—— groups, probably dimorphous, 1837, 171; like forms generally follow like formulæ, 172; like forms with unlike formulæ, 173; discordant formulæ, 177.
—— substances, their action when introduced into the blood, by J. Blake, 1843, 115; 1845, 82; 1846, 27.
Isopoda, Irish, 1843, 269; 1852, 294; British, list of, 1860, 224.
Isothermal lines, Prof. J. D. Forbes on, 1831–32, 213; 1840, 55.
—— lines of the globe, remarks by Prof. H. W. Dove on his maps of the, 1848, 85.

Jerrard's (G. B.) method for transforming and resolving equations of elevated degrees, Sir W. R. Hamilton on, 1836, 295.
Johnston's seismic map, on, 1858, 45.
Juno, planet, discovery of, 1831–32, 157.

Kakodyl, chloride of, 1859, 4.
Kanga, Mangree, and Glen languages, 1847, 175.
Kater's vertical collimator, 1831–32, 134.
Kellia, Ægean, Prof. E. Forbes on the, 1843, 142, 192.
Kimmeridge clay, large emydian from the, 1841, 168.
Knoblauch's researches on radiant heat, Rev. Prof. Powell on, 1854, 342.
Kyanized timber, R. Mallet on, 1843, 17.

Labridæ of North America, Sir J. Richardson on the, 1836, 208, 212.
—— of Ireland, 1840, 389; British, 1844, 302.
—— of New Zealand, Sir J. Richardson on the, 1842, 24.
—— of the China and Japan seas, Sir J. Richardson on the, 1845, 255.
—— of the London clay, Prof. Agassiz on the, 1844, 291.
Labyrinthodon leptognathus, fossil, Prof. Owen on the, 1841, 183; L. salamandroides, 183; L. ventricosus, 183; L. pachygnathus, 186; L. scutulatus, 188.
Labyrinthodontia, fossil, Prof. Owen on the, 1859, 158.
Lacaille's stars, reports on the reduction of, 1839, 171; 1840, 427; 1841, 327; 1842, 205; 1845, 339; 1847, 379.
Lacertilia, fossil, Prof. Owen on the, 1841, 144; 1859, 165.
Lactic acid, 1831–32, 525; 1859, 5.
Læmodipoda, C. Spence Bate on the, 1855, 19.
——, British, 1860, 224.
Lagrange's limit of the number of roots of a congruence, 1859, 235.
Lakes, Dr. Daubeny on the water of, 1836, 6.
——, J. F. Bateman on the supply of water from, 1855, 77.
Lalande's catalogue of stars, reports on the reduction of, 1838, 316; 1839, 174; 1840, 426; 1841, 330; 1842, 205; 1845, 339; 1847, 379.
Lamellibranchiata, Irish, 1843, 260; 1852, 293; 1857, 105–110, 221; 1859, 117.
—— of the Ægean Sea, 1843, 142, 145, 156, 158, 159, 161, 163, 165, 166, 168, 191.
——, British, taken in the dredge, Prof. E. Forbes on, 1850, 205, 230, 259.
——, South European, 1850, 264.
—— of the West coast of North America, P. P. Carpenter on the, 1856, 209.
——, British, list of, compiled by R. M'Andrew, 1860, 220.
——, list of, for local museums, 1855, 116.
Lamnidæ of the Sea of Japan, Sir J. Richardson on the, 1845, 195, 317.
Lamont's inclinometer, 1842, 9.
Language, Egyptian, Dr. C. C. J. Bunsen on the, 1847, 254, 291.
——, Celtic, importance of the study of the, as exhibited by the modern Celtic dialects, by Dr. C. Meyer, 1847, 501.

Language, Dr. C. C. J. Bunsen on the leading points in the history of the philosophy of, and of its results for general ethnology, 1847, 257; phenomena of, as to the vestiges of its formation, development and decay, 274; philosophical considerations on the origin of, and the principle of development in them, 285; classification of languages, 291.
——, Chinese and Indo-Chinese, Dr. Prichard on the, 1847, 247.
——, Chinese, Dr. C. C. J. Bunsen on the, 1847, 282.
—— of the Hindûs, General Briggs on the, 1850, 173.
——, results of Egyptian researches as to the origin and history of, with particular reference to Asiatic and African ethnology, by Dr. C. C. J. Bunsen, 1847, 254.
Languages, brief history of philological inquiries exemplifying the diversity and affinity of, 1831–32, 530.
—— and their affinities, Dr. Prichard on the history of, 1847, 236.
—— of Africa, Dr. Latham on the, 1847, 154.
—— of America, Dr. Prichard on the, 1847, 250.
——, Arian and aboriginal, of India, on the relation of the Bengali to the, by Dr. Max Müller, 1847, 319.
——, Indo-European, Dr. Prichard on the, 1847, 241.
——, Syro-Arabian, Dr. Prichard on the, 1847, 247.
——, Turanian, or Ugro-Tartarian, Dr. Prichard on the, 1847, 244.
——, *vide* Philology.
Laniadæ of North America, 1836, 170; of Dukhun, 1837, 248; of Ireland, 1840, 366.
Laplace's coefficients, account of, by Rev. Dr. Whewell in his report on electricity, 1835, 7.
Laridæ of North America, 1836, 184; of Dukhun, 1837, 251; of Ireland, 1840, 380; 1852, 291.
Lead district of Alston Moor, galvanic experiments in the, by H. L. Pattinson, 1839, 23.
Lead-mining districts of Yorkshire, S. Eddy on the, 1858, 167.
Lead, acetate of, J. Blake on its action on animals, 1843, 115.
——, acetate of, and sulphate of magnesia, or sulphate of soda, or sulphate of zinc, or sulphuric acid, or oxalic acid, Dr. T. Andrews on the heat of combinations of, 1849, 73, 74.
——, carbonate of, Prof. Johnston on, 1831–32, 481.
——, nitrate of, and sulphuric acid, Dr. T. Andrews on the heat of combination of, 1849, 74.
——, phosphates of, Prof. Johnston on, 1831–32, 484.
Lead, sulphurets of, 1831–32, 478.
——, vanadiate of, 1831–32, 470.
Leaves of plants, Prof. Lindley on the theory of wood being generated by the action of, 1833, 36; on the arrangement of, 40; on the structure of, 41.
Leech, British, Dr. T. Williams on the, 1851, 165–268.
Legendre's law of reciprocity, 1859, 241.
Leibnitz's Protogæa, notice of, 1831–32, 366.
Leiodon, fossil, British, Prof. Owen on, 1841, 144.
Leporidæ of North America, 1836, 157; Irish, 1840, 361.
Lerneada, Irish, 1843, 270; 1852, 294; British, 1860, 226.
Leucodore, Dr. T. Williams on the genus, 1851, 199, 208.
Level line, measured from the Bristol Channel to the English Channel, report of committee on a, by Rev. Dr. Whewell, 1838, 1.
Leveling operations between the Bristol Channel and the English Channel, account of, by T. G. Bunt, 1838, 11.
—— staff and vane, sketch of a, 1838, 18.
Libri's (M.) hypothesis of the conduction of heat, 1841, 8, 10.
Liebig's "Organic Chemistry applied to Physiology and Pathology," abstract of, by Dr. Lyon Playfair, 1842, 42.
Life, Dr. W. C. Henry on the term, 1833, 59.
Life-boats, on the construction and general use of, by General Chesney, 1854, 327.
—— and fishing-boats on the coasts of the United Kingdom, report on the, by A. Henderson, 1857, 308.
Light, report on the progress of optics, by Sir D. Brewster, 1831–32, 308.
——, Rev. Dr. Lloyd on the state of our knowledge of the physical theory of, 1834, 295:—
(Unpolarized), propagation of, 297; principle of interference, 303; reflexion and refraction of, 305; diffraction, 323; colours of thin and thick plates, 338.
(Polarized), polarization, 350; transversal vibrations, 352; reflexion and refraction of, 356; double refraction, 375; colours of crystalline plates, 395.
——, on the phenomena of absorption by crystallized media, by Rev. Dr. Lloyd, 1834, 393.
——, *vide* Solar, Spectrum, &c.
——, coloured, its action on germination, 1833, 54.
——, researches on the influence of, on the germination of seeds and the growth of plants, by R. Hunt, 1842, 75; 1844, 29; 1846, 33; 1847, 17.
——, influences of, on organic bodies, list of memoirs, &c. on, 1850, 153.
——, on the reduction of the chemical

action of, to an absolute measure, by Prof. Bunsen and Dr. H. E. Roscoe, 1856, 67.
Light, experiments on, referring to the apparent magnitudes of luminous meteors, 1857, 151.
——, zodiacal, Rev. Prof. Powell on the radiation of heat from the, 1854, 354.
—— and heat, Rev. Prof. Powell on the analogies of transmission of, by waves, 1854, 351.
Ligula of the Ægean Sea, Prof. E. Forbes on the, 1843, 142, 191.
Lima of the Ægean Sea, Prof. E. Forbes on the, 1843, 145, 192.
Limacidæ, British and foreign, Prof. E. Forbes on the, 1839, 142.
——, Irish, W. Thompson on the, 1843, 252.
Lime, method of detecting barytes and strontian in, 1831–32, 476.
——, carbonate of (Arragonite), Prof. Johnston on, 1831–32, 480; hydrated, 481.
—— and soda, carbonate of, 1831–32, 480.
Limestone of Dukhun, Col. Sykes on the, 1837, 225.
—— of North America, 1834, 43 *et seq.*
——, mountain, galvanic experiments to determine the existence or non-existence of electrical currents in the, 1839, 22.
——, magnesian, chemical examination of, by A. Gages, 1859, 66.
——, Gweedore metamorphic, containing garnets, chemical examination of, by A. Gages, 1859, 75.
Limneadæ, Irish, W. Thompson on the, 1843, 253.
Lingula, Dr. Carpenter on the microscopic structure of the shells of, 1844, 18.
Liniadæ, Dr. T. Williams on the, 1851, 171, 177, 243, 244.
Linseed, experiments on the growth of, by Prof. Buckman, 1859, 22; 1860, 42.
Linum perenne (perennial flax), experiments on the growth of, by Prof. Buckman, 1857, 213.
Lithia in mineral waters, 1836, 16.
Lithodomus, microscopic structure of the shell in the, by Dr. Carpenter, 1847, 99, 131.
Lithography, as applied to ornithology, 1844, 202.
Lithophyta, Irish, W. Thompson on the, 1843, 287.
Lizard, pleurodont eocene, British, Prof. Owen on, 1841, 145; scincoid oolite, 145.
Lloyd's inclinometer, 1842, 8.
Locomotive boilers, on the strength of, and the causes which lead to explosion, by W. Fairbairn, 1853, 53.
Logarithms, Rev. Dr. J. Booth on the geometrical origin of, 1856, 68.
London clay, Prof. Agassiz on the fossil fishes of the, 1844, 279.
Longitude, on the determination of the arc of, between the observatories of Armagh and Dublin, by Rev. Dr. Robinson and Sir W. Hamilton, 1839, 19.
Lophiidæ, Irish, 1840, 389; British, 1844, 302.
—— of the China and Japan seas, Sir J. Richardson on the, 1845, 203.
Lophiodon, fossil, British, Prof. Owen on, 1843, 224.
Lophobranchii of North America, Sir John Richardson on the, 1836, 220.
—— of Ireland, 1840, 396; 1852, 292; British, 1844, 303.
—— of New Zealand, Sir J. Richardson on the, 1842, 28.
—— of the China and Japan seas, Sir J. Richardson on the, 1845, 202.
Lophopus, Prof. Allman on the polyzoon, 1850, 305–327.
Loricati, Irish, W. Thompson on the, 1840, 385.
Lottia of the Ægean Sea, Prof. E. Forbes on the, 1843, 135, 188.
Lumbricina, Irish, W. Thompson on the, 1843, 272.
Lunar and planetary observations, Greenwich, G. B. Airy on the reductions of the, 1838, 315; 1840, 423.
—— influence on the temperature of the air, J. P. Harrison on, 1857, 248; 1859, 193.
—— theories, account of, by G. B. Airy, 1831–32, 174.
—— photography, W. De la Rue on, 1859, 139.
——, *vide* Moon.
Lungs and air-tubes, report of experiments on the physiology of the, by Dr. C. J. B. Williams, 1840, 411.
Lutra, fossil, British, Prof. Owen on, 1842, 72.
Lutraria elliptica, Dr. Carpenter on the microscopic structure of the shell of, 1847, 103, 131.
Lycidice, Dr. T. Williams on the, 1851, 197, 210, 230.
Lycopodiaceæ, Prof. Henfrey on the reproduction of, 1851, 111, 122.
Lyonsia, Dr. Carpenter on the microscopic structure of the shell of, 1847, 105.

Macacus, fossil, British, Prof. Owen on the, 1842, 55.
Machinery, water-pressure, J. Glynn on, 1847, 147; 1848, 11.
——, water-pressure, applied to cranage and hoisting purposes, &c., Sir W. G. Armstrong on, 1854, 417.
Macroura, Irish, 1843, 268; 1852, 293; 1858, 178, 266, 286, 292; 1860, 30.
——, British, 1850, 243; list of, 1860, 223.
Mactraceæ, Dr. Carpenter on the microscopic structure of the shells of, 1847, 103, 131.
Madder, Dr. Schunck on the colouring matters of, 1846, 24; of Avignon madder, 1847, 136; 1848, 57, 71.

Maecenas, colossal bust of, presented by Dr. Manni, 1837, xliii.
Maenids of the China and Japan seas, Sir J. Richardson on the, 1845, 239.
—— of North America, Sir J. Richardson on the, 1836, 206, 210.
Magnesia, sulphate of, and chloride of barium, Dr. T. Andrews on the heat of combination of, 1849, 71.
——, sulphate of, and nitrate of barytes, heat of combination of, 1849, 72.
——, sulphate of, and acetate of lead, heat of combination of, 1849, 73.
Magnesian conglomerate from Downhill, Co. Londonderry, A. Gages on the chemical examination of the, 1859, 69.
Magnet, powerful temporary, 1831–32, 85.
Magnetic force, terrestrial, S. H. Christie on the, 1833, 118.
—— and meteorological observations, report for procuring a continuance of the, 1858, 295.
—— disturbance, remarkable, at Toronto, 1841, 340; remarks on the, 345; also observations of the same disturbance at Trevandrum, St. Helena, and the Cape of Good Hope, by General Sabine, 347, 349, 351.
—— disturbances, on, 1842, 6.
—— force in Ireland, on the direction and intensity of the, by Rev. Dr. Lloyd, General Sabine, and Admiral Sir J. C. Ross, 1835, 117:—
1. Horizontal intensity, 117.
2. Dip and intensity, 137.
3. Isodynamic and isoclinal lines, 150.
—— force, in Scotland, General Sabine on the direction and intensity of, 1836, 97:—
Observations of dip, 97.
Intensity:—
By Prof. Lloyd's statical method, 105.
By the method of horizontal variations, 110.
—— intensity of the earth's surface, report on the variations of the, by General Sabine, 1837, 1.—I. Historical notices:—
Bessel, 3; Humboldt, 5; Humboldt and Gay-Lussac, 7; Sabine, 8, 11, 19, 33; Hansteen, 10; Erichsen, 11; Boeck, 11; Lütke, 13; Lenz, 13; King, 15; Keilhau, 11, 22; Hansteen and Due, 23; Erman, 11, 23; Kupffer, 25; Quetelet, 26; Douglas, 27; Fitz-Roy, 32; Rudberg, 33; Lloyd, 33; Ross, 33; Estcourt, 35; Freycinet, 35; Forbes, 42; Duperrey, 1838, 318; Bache, 1838, 319.
II. General Table of Intensities, 1837, 42.
III. General conclusions, 63.
Appendix, 497: Errata, 500.
Appendix, 1838, 318.
—— instruments:—transportable magnetometer, Prof. Lloyd's inclinometer, Weber's inductive inclinometer, Lamont's inclinometer, 1842, 8, 9.
Magnetic needle, General Sabine on the diurnal variation of the, in different months of the year, 1854, 357.
—— and meteorological observatory at Toronto, report of the committee on the expediency of continuing the, 1848, 99.
—— observatory at Philadelphia, Mr. Bache on the, 1842, 209.
—— observatories, British Colonial, on some of the results obtained at the, by General Sabine, 1854, 355.
—— and meteorological observatories, report of the joint committee of the Royal Society and the British Association for the continuance of, 1858, 295.
—— surveys, 1838, 49; 1841, 40; 1842, 4; 1843, 59; 1844, 147; 1845, 3; 1857, 130; 1859, 167.
—— survey of Great Britain, memoir on the, by General Sabine, 1838, 49–196:—
Introduction, 49.
Division I. Dip.
Errors of dipping-needles, and improvements, 51.
Annual alteration of the dip, 62.
Dip in London (May 1838), 64.
Sect. 1. Observations in England, 67.
Sect. 2. Observations in Scotland, 86.
Sect 3. Observations in Ireland (by Rev. Dr. Lloyd), 91.
Summary and deduction of the isoclinal lines, 120.
General table of the dip observations, 125.
Division II. Intensity.
Sect. 1. Observations in England:—statical method, 138; method of horizontal vibrations, 148.
Sect. 2. Observations in Scotland:—statical method, 155; method of horizontal vibrations, 161.
Sect. 3. Observations in Ireland (by Rev. Dr. Lloyd):—method of horizontal vibrations, 165; statical method, 176.
Summary and deduction of the isodynamic lines, 186.
General table of the intensity observations, by the statical method, 190.
Extension of the isoclinal and isodynamic lines into meridians east and west of the British Islands, 193.
—— survey of Great Britain, report of the committee on the, 1857, 130; 1858, 285.
—— survey of Ireland, Rev. Dr. H. Lloyd on the instruments employed in the, 1858, 260.
—— survey of Scotland, by J. Welsh, on some results of the, by B. Stewart, 1859, 167:—
Div. I. Dip, 167.
Div. II. Total force, 175.
Div. III. Declination, 183.
Magnetical and meteorological observations, simultaneous, report on a series of resolu-

tions, and memorial to Her Majesty's Government, 1839, 31.
Magnetical and meteorological observations, simultaneous, second report, 1840, 427.
——, third report, 1841, 38.
——, fourth report, 1842, 1–11:—
Antarctic expedition under Capt. Ross, 1.
British and foreign observatories, &c., 2.
Magnetic surveys, 4.
Observations made at sea, 5.
Magnetic disturbances, 6.
New instruments and modes of observation, 8.
Publication of magnetic observations, descriptions of observatories, &c., 9.
Annual report of Prof. Von Boguslawski, 11.
——, fifth report, 1843, 54:—
1. Antarctic expedition, 54.
2. British and foreign observatories, &c., 56.
3. Magnetic surveys, 59.
4. North American survey, 59.
5. Naval observatories, 59.
——, sixth report, 1844, 143–155:—
Antarctic expedition, 143.
British Colonial magnetical and meteorological observatories, 144.
New series of observations at fixed stations, 146.
Magnetic surveys and itinerant observations in progress, 147.
Completion of the Antarctic survey, 148.
Proposed survey of the Eastern Archipelago and China Seas, 148.
Surveys—Austria, Sweden, &c., 148.
Itinerant observations not in the nature of formal surveys, naval observatories, &c., 149.
Publications relating to terrestrial magnetism, 149.
Discussion of meteorological observations, 152.
Letter from Prof. Boguslawski to General Sabine, 154.
——, seventh report, with the proceedings connected with the Magnetical and Meteorological Conference at Cambridge, 1845, 1:—
Arctic expedition, 1.
New stations for meteorological and magnetic observations, 2.
Magnetic surveys, 3.
Publication of magnetic and meteorological observations, 3.
Approaching conclusion of the present system of magnetic and meteorological establishments, and considerations thereby rendered necessary, 9.
Appendix:—Circular on the part of the Committee, by Sir J. F. W. Herschel, 13; Replies to the same:—
from Prof. W. Weber, 14, 16.
M. Kupffer, 18.
Prof. Loomis, 20.
Magnetical and meteorological observations, seventh report, *continued*. Replies from Dr. Lamont, 22, 63.
Prof. Dove, 24, 28, 57, 60.
M. Quetelet, 31.
Sir T. M. Brisbane, 33.
J. A. Broun, 34.
Rev. Dr. Lloyd, 35.
Prof. Phillips, 37.
Dr. Adolphe Erman, 38.
Prof. Ch. F. Gauss, 42, 64.
M. Kreil, 45, 49.
G. B. Airy, 52.
Lieut.-Col. Sabine, 53.
Baron von Humboldt, 64.
W. C. Redfield, 65.
Invitation letter to attend the Conference, 66.
Letters from the Marquis of Northampton and Sir John Herschel to Sir Robert Peel, 67.
Resolutions of the Conference, adopted by the General Committee, 67.
Report of the committee for a continuance of the magnetic and meteorological observations, 69.
Magnetical and meteorological observations on the Continent, Dr. Lamont on the system of, 1842, 207.
—— ——, list of, in the possession of the Royal Society, 1845, 8.
Magnetism of the earth, Prof. Christie's report on the, 1833, 105–130:—
I. The direction of the terrestrial magnetic force, 106.
1. The variation of the needle.
2. Change in the direction of the needle.
3. Diurnal change in the variation.
4. The dip of the magnetic needle.
5. Variation of the dip.
II. Intensity of the terrestrial magnetic force, 118.
——, electricity, and heat, the Rev. Dr. Whewell's report on the mathematical theories of, 1835, 1–34.
——, terrestrial, on the phenomena of, being an abstract of the "Magnetismus der Erde" of Prof. Ch. Hansteen, by General Sabine, 1835, 61.
——, terrestrial, on the calculation of the Gaussian constants of, for 1829, by A. Erman, 1846, 92; 1847, 377; 1848, 98.
——, terrestrial, on the Kew magnetographs for self-registration of the variations of, 1851, 325, 328; 1859, 200.
—— and meteorology, terrestrial, publications relating to, 1842, 9; 1843, 56; 1844, 149; 1845, 3.
Magnetograph, vertical-force, of the Kew observatory, 1849, 86; 1850, 121; 1851, xxvii, 325, 330, 351, 360; 1859, 205.
——, horizontal-force, for the Toronto observatory, 1849, 83.
——, vertical-force, for the Toronto observatory, 1849, 86; 1850, 121.

Magnetograph, declination, of the Kew observatory, 1850, 178; 1851, 325, 328, 350, 362; 1859, 202.
——, horizontal-force, of the Kew observatory, 1849, 82; 1850, 178; 1851, 325, 329, 351, 358; 1859, 204.
Magnetographs of the Kew observatory, General Sabine on the, 1851, 325; report on the, by J. Welsh, 328.
——, self-recording, at the Kew observatory, account of the construction of the, by B. Stewart, 1859, 200:—
Sect. I. Preliminary description, 201.
Sect. II. Detailed description of the instruments:—
1. Declination magnetograph, 202.
2. Horizontal-force magnetograph, 204.
3. Vertical-force magnetograph, 205.
4. Registering cylinder and clockwork, 206.
Sect. III. Description of the photographic process, 206.
Sect. IV. On the method of ascertaining the instrumental coefficients, tabulating from the curves, &c., 222.
Sect. V. Improvements in the construction of a set of self-recording magnetographs, 228.
Magnetometer, transportable, 1842, 8.
——, transportable, by Meyerstein, for the Guiana survey, 1841, 40.
——, theodolite, 1858, 260.
Magnets, M. Hansteen on the theory of, 1835, 75.
Malacopterygii of North America, Sir J. Richardson on the, 1836, 213, 217, 219.
—— of Ireland, W. Thompson on, 1840, 390.
—— of the seas of China and Japan, Sir J. Richardson on the, 1845, 287.
——, fossil, 1843, 205; of the London clay, Prof. Agassiz on the, 1844, 292, 307.
Malacostraca, Rev. L. Jenyns on the, 1834, 149, 193; proposed arrangement of, by C. Spence Bate, 1855, 21.
Mammalia, Rev. L. Jenyns on the state of knowledge respecting the, 1834, 143.
—— of North America, Sir J. Richardson on the, 1836, 137.
—— of Ireland, W. Thompson on the, 1840, 358, 401; 1852, 291.
—— of Dukhun, Col. Sykes on the, 1837, 246.
——, fossil, of the United States, Prof. H. D. Rogers on the, 1834, 23.
——, fossil, British, report on, by Prof. Owen, 1842, 54–74:—
Part I. Unguiculata and Cetacea:—
Quadrumana, 55.
Cheiroptera, 56.
Insectivora, 57.
Carnivora, 62.
Cetacea, 72.
Rodentia, 72.
Marsupialia, 72.
Addendum, 74.
Mammalia, fossil, *continued*.
Part II. Ungulata, 1843, 208–241:—
Order Pachydermata.
Elephas, 208.
Varieties.—Question of species, 209.
Strata and localities, 216.
Indications of the physical forces which operated on the unstratified drift containing bones and teeth of the Mammoth, 219.
Mastodon, 219.
Rhinoceros, 220.
Hippopotamus, 223.
Lophiodon, 224.
Palæotherium, 225.
Anoplotherium, 225.
Dichobunes, 225.
Chœropotamus, 226.
Hyracotherium, 226.
Sus, 228.
Equus, 230.
Order Ruminantia.—Fam. Bovidæ:
Urus, 232.
Bos, 233.
Capra, 236.
Cervus, 236.
Capreolus, 236.
Elaphus, 236.
Dama, 237.
Megaceros, 237.
Conclusion, 239.
——, on the skull of, by Prof. Owen, 1846, 189, 200, 213, 219, 240.
Mammals, extinct, of Australia, Prof. Owen's report on the, 1844, 223:—
Introduction.
Diprotodon, species D. Australis, 224.
Nototherium: 1. N. inerme, 231; 2. N. Mitchelli, 232.
——, list of, selected for observation of periodical phenomena, 1845, 329, 334; 1850, 341.
Mammoth, fossil, British, Prof. Owen on the, 1843, 209.
Man, *vide* Human race.
Mandara language, 1847, 185.
Mandingo languages, 1847, 162.
Manganese, Prof. Johnston on, 1831–32, 476; in blood, 523.
——, red salts of, 1831–32, 482.
—— in springs, Dr. Daubeny on, 1836, 15.
Mangel-wurzel, Prof. Buckman's experiments on the growth of, 1859, 27; 1860, 37.
Manna sugar (Mannite), analysis of, 1831–32, 511.
Manufactures of Dukhun, Col. Sykes on the, 1837, 325.
——, list of animal and vegetable products imported into Liverpool, Prof. Archer's report on the, 1857, 254.
——, list of animal, vegetable, and mineral substances imported into the Clyde, M. Connal and W. Keddie's report on the, 1858, 185.

Manufactures, report of committee on the patent laws, 1858, 164; 1859, 191.
Manures essential to cultivated crops, report on field experiments and laboratory researches on the constituents of, by Dr. A. Voelcker, 1859, 31:—
Field experiments, 31.
Experiments upon swedes, 34.
Experiments on turnips, 38.
Field experiments upon wheat, 42.
Maps, skeleton, for recording the distribution of plants and animals, report of committee on, 1840, 445; 1841, 327.
—— of the monthly isothermal lines of the globe, Prof. Dove's, his remarks on the, 1848, 85.
Mare Crisium and its shores, Prof. C. P. Smythe on the, 1854, 416.
Margaritaceæ, Dr. Carpenter on the microscopic structure of the shells of the, 1844, 20; 1847, 95.
Marine animals, Prof. E. Forbes on Ægean invertebrata, 1843, 130; on the distribution of, 152.
—— zoology, British, Prof. E. Forbes on the investigation of, by means of the dredge, 1850, 192.
—— invertebrate fauna, British, list of, by R. M'Andrew, 1860, 217.
—— zoology of Great Britain, reports on the, 1840, 444; 1841, 331; 1842, 213; 1844, 390; 1850, 192; 1857, 104; 1858, 176, 282; 1859, 116.
Marmots of North America, 1836, 153.
Mariotte, law of, Prof. Johnston on the, 1831–32, 451.
Marriages in large towns of Scotland, on the, 1842, 134.
Marsupialia of North America, Sir J. Richardson on the, 1836, 149.
——, fossil, British, Prof. Owen on, 1842, 72.
——, pachydermoid, fossil, of Australia, Prof. Owen on the, 1844, 231.
Martins and weasels, North American, 1836, 141, 143; of Ireland, 1840, 359.
Mastodon, fossil, of North America, Prof. H. D. Rogers on, 1834, 25.
——, fossil, British, Prof. Owen on, 1843, 219.
Materials, P. Barlow's report on the strength of, 1833, 93.
Mathematics in Belgium, M. Quetelet on the state of, 1835, 35.
Mazatlan Mollusca, list of the Reigen collection of, 1856, 243.
Measurement of water by weir boards, Prof. J. Thomson on the, 1856, 46; 1858, 181; 1860, 217.
Mechanico-chemical examination of rocks and minerals, A. Gages on the, 1859, 65.
Mechanics in Belgium, M. Quetelet on, 1835, 51.
Medicinal plants, Prof. J. Buckman on the growth of some, 1857, 213.
—— plants of Dukhun, Col. Sykes on the, 1837, 244.
Medicinal springs, Dr. Daubeny on, 1836, 1.
Medicines, report on the physiological action of, by J. Blake, 1843, 115; 1845, 82; 1846, 27.
Medulla oblongata, Dr. W. C. Henry on the, 1833, 72.
Medusæ of the Ægean Sea, Prof. E. Forbes on the, 1843, 147, 152.
Medusidæ, British, 1860, 233.
Megaceros Hibernicus, fossil, Prof. Owen on, 1843, 237.
Megalosaurus, fossil, British, Prof. Owen on, 1841, 103; 1859, 164.
Megatherium, lecture on the fossil remains of, by Dr. Buckland, 1831–32, 104.
——, remains of, North America, 1834, 26.
Meiocene formations of North America, Prof. H. D. Rogers on the, 1834, 35.
Meles, fossil, British, Prof. Owen on, 1842, 70.
Melibœa of the Ægean Sea, Prof. E. Forbes on the, 1843, 133, 186; Irish, 1843, 250.
Melilotus, Prof. Buckman on the growth of, 1857, 209.
Melloni's thermomultiplier, 1835, 167.
Memoirs, catalogue of philosophical, preliminary report on, by A. Cayley, R. Grant, and Prof. Stokes, 1856, 463.
——, scientific, reports on the translation and publication of, 1840, 446; 1841, 328; 1842, 210; 1843, 129.
Mephitic air, paper on, by Cavendish, 1839, 63.
Mephitis Americana, Sir J. Richardson on, 1836, 144.
Mercantile steam transport economy, C. Atherton on, 1856, 423; 1857, 112; 1859, 124.
Mercurial dish, Cacciatore's, 1858, 73, 78.
Merlinus of the London clay, 1844, 294, 308.
Meropidæ of Dukhun, 1837, 248; Irish, 1840, 372.
Merulidæ of North America, Sir J. Richardson on the, 1836, 171.
——, Irish, W. Thompson on the, 1840, 366.
Metallic-plate engraving, as applied to ornithology, Prof. Strickland on, 1844, 202.
Metallic substitutions, Dr. T. Andrews on the heat developed in, 1849, 76.
—— veins, R. W. Fox on the electricity of, 1837, 133.
Metals, precipitation of, from solutions in a malleable state, Prof. Johnston on the, 1831–32, 467.
——, electro-negative, Prof. Johnston on, 1831–32, 468.
——, electro-positive, Prof. Johnston on the reduction of, 1831–32, 475.
——, solution of, in nitric acid, Dr. T. Andrews on the, 1849, 74.
——, on the mechanical properties of, as derived from repeated meltings, by W. Fairbairn, 1853, 87.
—— for ordnance, report of the committee on, 1855, 100.

Metals, report on the internal changes in the constitution of, 1843, 294.
Metamerism, Prof. Johnston on, 1831–32, 435; list of metameric bodies, 438.
Metaphosphoric acid, Prof. Johnston on, 1831–32, 458.
Meteorites, 1849, 2, 32, 33, 34, 35; 1850, 89, 118, 119, 120, 122, 123, 125, 127; 1851, 43, 46, 47; 1852, 239; 1855, 94; 1857, 133, 140, 149, 150; 1858, 152; 1859, 93, 94; 1860, 22, 48.
——, analysis of, 1849, 32, 33; 1850, 89, 124, 125; 1857, 150.
——, phosphorus in, 1849, 33.
—— and fireballs, catalogue of, by R. P. Greg, 1860, 48.
Meteorological instruments, report of committee appointed to provide, for the use of M. Agassiz and Mr. M'Cord, 1841, 41.
—— instruments employed in the observatory at Senftenberg, self-registering, Baron Senftenberg on the, 1845, 108.
—— observations, reports on the reduction of, 1839, 173; 1840, 432; 1841, 42; 1842, 208; 1843, 60, 295.
—— observations, hourly, at Plymouth, reports on the, by Sir W. S. Harris, 1835, 181; 1838, 21; 1839, 149; 1841, 328; 1842, 30; 1843, 291.
—— observations, hourly, in Scotland, reports on, by Sir D. Brewster, 1839, 27; 1840, 349; 1841, 329; 1842, 206; 1843, 292, 293; 1844, 391.
—— observations in astronomical observatories, Prof. J. D. Forbes on, 1840, 143.
—— observations, sedentary, Prof. J. D. Forbes on, 1840, 149; travelling, 151.
—— observations, list of, in the possession of the Royal Society, 1845, 2.
—— observations proposed to be established in the United States, Prof. Henry on the system of, 1851, 320.
—— observations taken at St. Michael's, results of, 1850, 133.
—— and magnetical observations, simultaneous, reports on, 1839, 31; 1840, 427; 1841, 38; 1842, 1; 1843, 54; 1844, 143; 1845, 1.
—— and magnetical observations, Dr. Lamont on the system of, on the Continent, 1842, 207.
—— observations at Southampton by J. Drew, 1851, 54.
—— observations in the Bengal Presidency, Col. Sykes on, 1852, 252.
—— and magnetic observatories, report for procuring a continuance of, 1858, 295.
——, electro-, observations at the Kew observatory, 1844, 132; 1850, 179; 1851, 357.
—— register, electro-magnetic, of the Kew observatory, Prof. Wheatstone's report on the, 1843, xl.
Meteorology, Prof. J. D. Forbes's report on, 1831–32, 196–258:—
Introduction.
Meteorology, *continued.*
Constitution of the atmosphere, 206.
Temperature, 208.
Atmospheric pressure, 225.
Humidity, 239.
Atmospheric phenomena and precipitations, 246.
Rain, 249.
Atmospheric electricity, 252.
Aurora borealis, 254.
——, Supplementary report, 1840, 37–156:—
Introduction, 37.
I. Temperature, 42:—
A. Thermometers, 46.
B. Atmospheric temperature, 50.
C. Isothermal lines, 55.
D. Decrease of temperature with height, 57.
E. Radiation, 60.
F. Proper temperature of the globe and of space, 66; solar heat, 68; atmospheric heat, 76; temperature of space, 79; proper heat of the earth, 81; springs, 84.
II. Atmospheric pressure:—
A. Barometers, 85.
B. Mean height of the barometer, 88.
C. Barometric oscillations, 90.
D. Barometric variation with height, 92.
III. Humidity:—
A. Hygrometers, 95.
B. Distribution of vapour in the atmosphere, 101.
IV. Wind, 102:—
A. Anemometers, 103.
B. Phenomena of wind generally, 104.
C. Phenomena of storms, 109.
V. Clouds, rain, 111.
VI. Atmospherical electricity, 116.
VII. Meteors, 117.
VIII. Aurora borealis, 120.
IX. Optical meteorology:—
A. Colour of the sky and clouds, 120; dry fogs, 122; blue sun, 123; secondary sunset tints, 123; aërial shadows, 124; polarization of skylight, 124.
B. The rainbow, 125.
C. Halos and parhelia, 130.
D. Coronæ, glories, &c., 135.
X. Suggestions, 143:—
A. Public observatories, 143.
B. Sedentary observations, 149.
C. Travelling observations, 151.
—— in Belgium, M. Quetelet on, 1835, 56.
—— of Bengal, Col. Sykes on the, 1852, 252.
—— of Birmingham, W. Wills on the, 1852, 297.
—— of Bombay, General Sabine on the, 1845, 73.
—— of Toronto, General Sabine on the, 1844, 42:—
Introduction; temperature, 43; same-

Meteorology of Toronto, *continued.*
ous vapour, 47; atmospheric pressure, 50; mean monthly pressure, 52; Postscript, 60.
——, on the wax-paper photographic process for photometeorographic registrations, 1859, 206, 220.
——, works on, 1831–32, 204; 1843, 56.
Meteors, Prof. J. D. Forbes on, 1840, 117.
——, luminous, observations of, by Rev. Prof. Powell and others, 1848, 1; 1849, 1; 1850, 89; 1851, 1; 1852, 178; 1853, 1; 1854, 386; 1855, 79; 1856, 53; 1857, 131; 1858, 137; 1859, 81; 1860, 1.
——, luminosity of, from solar reflexion, on, 1860, 15; on the luminous trains left by, 15; on the duration of, 17; on the hypothesis that the intensity of the light of, is caused by the oxygen in the atmosphere, 18; list of 168 bolides observed from 1841–1853, 19; results of the most remarkable, as regards their general observed direction, 21.
Miasms, or marshy exhalations, Dr. W. Henry on, 1834, 89.
Microscopic structure of shells, Dr. Carpenter on the, 1844, 1; 1847, 93.
—— structure of the integumentary skeleton of Crustacea, C. Spence Bate on the, 1855, 38.
—— sections of the skin and hairs of the Amphipoda, by C. Spence Bate, 1855, 61.
Migration of birds, Sir J. Richardson on the, 1836, 186.
Milk, preparation for preserving, 1831–32, 525.
Mill, Whitelaw's, 1847, 149, 153.
——, Dr. Barker's, 1847, 148.
Mills, sugar and oil, of Dukhun, 1837, 278.
Mineral chemistry, Rev. Dr. Whewell on, 1831–32, 343; Prof. Johnston on, 484.
—— compounds, on the application of isomorphism to, 1831–32, 344, 424.
—— compounds, artificial, 1831–32, 486.
—— kingdom, typical epitome of the, for local museums, 1855, 125; 1856, 462.
—— substances, forms of, 1831–32, 427; pseudomorphous, 1837, 295.
—— substances imported into the Clyde, M. Connal and W. Keddie's report on, 1858, 236.
—— veins, report on the state of knowledge respecting, by J. Taylor, 1833, 1.
—— and thermal waters, report on the state of our knowledge respecting, by Dr. Daubeny, 1836, 1; works on, 76; catalogue of thermal springs, 80.
—— waters, sulphur in, Prof. Johnston on, 1831–32, 462; organic matter in, 521.
Mineralogy, Rev. Dr. Whewell's report on, 1831–32, 322–365:—
Introduction, 322.
1. Physical characters of minerals, 325.
2. Crystallography, 327.
3. Optical properties of minerals, 335.
Mineralogy, *continued.*
4. Chemical mineralogy, 343.
5. Classification of minerals, 350:—
1. Distinction of species.
2. Systems of classification.
3. Nomenclature.
6. Particular discoveries and researches, 362.
——, epitome of, for local museums, 1855, 125.
Minerals of Dukhun, Col. Sykes on the, 1837, 229.
——, report on the results obtained by the mechanico-chemical examination of, by A. Gages, 1859, 65.
——, octohedral, on the composition of, 1831–32, 485.
Mines, water-pressure engines for the drainage of, J. Glynn on, 1848, 11.
——, R. W. Fox on the subterranean temperature of, 1837, 134; 1840, 309.
—— in Cornwall, R. W. Fox's report on the temperature of, 1857, 96.
—— in Ireland, report on the temperature of, 1844, 221.
Mining districts, lead-, of Yorkshire, S. Eddy on the, 1858, 167.
—— records, establishment of a depository for, 1838, xxiii; 1839, 174.
Mitchell (Rev. J.) on earthquakes, 1850, 17.
Mitra of the Ægean Sea, Prof. E. Forbes on the, 1843, 140, 291; South European, 1850, 279 *et seq.*; North-east Atlantic, 1856, 152; West coast of North America, 1856, 338.
Mitscherlich's law of isomorphism, 1831–32, 344, 422.
Modiola, Dr. Carpenter on the structure of the shell in the, 1847, 99.
Mollusca, Rev. L. Jenyns on the state of knowledge respecting the, 1834, 213.
—— of the Ægean Sea, report on the, by Prof. E. Forbes, 1843, 130–146:—
1. Cephalopoda, 131.
2. Pteropoda, 131, 132.
3. Nucleobranchiata, 131, 132.
4. Gasteropoda Nudibranchiata, 132.
Inferobranchiata, 133, 134.
Tectibranchiata, 133, 134.
Scutibranchiata, 133, 134.
Cyclobranchiata, 133, 135.
Cirrhobranchiata, 133, 135.
Pulmonifera, 136.
Pectinibranchiata, 136.
5. Palliobranchiata, 141.
6. Lamellibranchiata Dimyaria, 142; Monomyaria, 145.
7. Tunicata, 146.
Provinces of depth, 154.
Appendix, 193.
—— of the West coast of North America, report on the state of knowledge of the, by P. P. Carpenter, 1856, 259:—
Physical conditions, and cautions to be observed, 260.

Mollusca of W. coast of N. America, *continued.*
Sources of information in historical order, 167.
Tabulated geographically and zoologically, with remarks, 298.
—— of the North-east Atlantic and neighbouring seas, report on the, by R. M'Andrew, 1856, 101.
——, British, list of, compiled by R. M'Andrew, 1860, 218.
—— of the Frith of Clyde, 1856, 49.
—— of Ireland, 1843, 247; 1852, 292; 1857, 104, 220; 1858, 178, 262; 1859, 80; 1860, 29.
Mollusca, Acephala, 1834, 224; Ægean, 1843, 141; of Ireland, 1843, 259; 1852, 292; 1857, 105, 225; British, 1850, 205, 229; list of, 1860, 220; of the North-east Atlantic, &c., 1856, 102, 137, 138; of the West coast of North America, 1856, 298.
——, Brachiopoda, 1834, 224; of Ireland, 1843, 259; of the West coast of North America, 1856, 298; North-east Atlantic, &c., 1856, 114; 1857, 108, 225; of the Ægean Sea, 1843, 141, 193; British, 1860, 222.
——, Cephalopoda, notice of memoirs on the, 1834, 218; of the Ægean Sea, 1843, 131; of Ireland, 1843, 248; British, 1850, 241; list of, 1860, 218; of the North-east Atlantic, 1856, 133, 137; of the West coast of North America, 1856, 345.
——, Cirrhipeda, 1834, 225; Irish, 1843, 265; 1852, 293; British, 1850, 244; 1860, 226.
——, Cirrhobranchiata, of the Ægean Sea, 1843, 133, 188; of Ireland, 1843, 259; British, 1850, 200, 220; 1860, 219; North-east Atlantic, &c., 1856, 117; West coast of North America, 1856, 317.
——, Cyclobranchiata, of the Ægean Sea, 1843, 133, 188; of Ireland, 1843, 259; 1857, 106; British, 1850, 200; 1860, 219; North-east Atlantic, &c., 1856, 116, 117.
——, Gasteropoda, Rev. L. Jenyns on the, 1834, 223; of the Ægean Sea, 1843, 132; of Ireland, 1843, 249; 1852, 292; 1857, 106, 225; of the North-east Atlantic, &c., 1856, 115, 144; British, 1850, 200, 220, 260; 1860, 218; of the West coast of North America, 1856, 312.
——, Lamellibranchiata, of the Ægean Sea, 1843, 142; of Ireland, 1843, 260; 1852, 293; 1857, 105, 221; of the West coast of North America, 1856, 299; South European, 1850, 264, 265; British, 1850, 205, 230, 259; 1860, 220.
——, Nucleobranchiata, of the Ægean Sea, 1843, 131, 186; of Ireland, 1843, 249.
——, Nudibranchiata, British, report on the, by J. Alder and A. Hancock, 1844, 24.
——, Nudibranchiata, of the Ægean Sea, 1843, 132, 186; of Ireland, 1843, 250; 1852, 202; British, 1850, 241; 1856, 50; 1860, 220; of the West coast of North America, 1856, 312.
Mollusca, Palliobranchiata, 1834, 224; of the Ægean Sea, 1843, 141, 193; of the West coast of North America, 1856, 298; South European, 1850, 265; of the North-east Atlantic, 1856, 114; of Ireland, 1843, 259; 1857, 108, 225; British, 1850, 260; 1860, 222.
——, Pectinibranchiata, of the Ægean Sea, 1843, 136, 188; of Ireland, 1843, 254; 1852, 292; South European, 1850, 266; of the West coast of North America, 1856, 323; British, 1860, 218.
——, Pteropoda, 1834, 223; of the Ægean Sea, 1843, 131, 132; of Ireland, 1843, 249; of the North-east Atlantic, &c., 1856, 114, 144; South European, 1850, 293; British, 1850, 260; 1860, 220.
——, Pulmonifera, report on the distribution of, in the British Isles, by Prof. E. Forbes, 1839, 127.
——, Pulmonifera, Ægean, 1843, 136; Irish, 1843, 252, 254; 1852, 292; West coast of North America, 1856, 313; South European, 1850, 268 *et seq.*
——, Scutibranchiata, of the Ægean Sea, 1843, 133, 188; of Ireland, 1843, 258; British, 1850, 200; 1860, 219; South European, 1850, 265; of the West coast of North America, 1856, 317.
——, Tectibranchiata, of the Ægean Sea, 1843, 133, 187; of Ireland, 1843, 251; 1852, 292; South European, 1850, 265; of the West coast of North America, 1856, 313; British, list of, 1860, 219.
——, testaceous, of Dukhun, 1837, 252; of the Ægean Sea, 1843, 156; of Ireland, 1843, 252; 1852, 292; 1857, 105, 220; 1858, 283; South European, 1850, 264; of the North-east Atlantic, &c., 1856, 101; of the West coast of North America, 1856, 298; British, 1850, 200, 220, 248; 1860, 218.
——, Tunicata, 1834, 224; Irish, 1843, 264; 1852, 292; 1857, 105, 111; of the Ægean Sea, 1843, 146; British, 1850, 241; list of, 1860, 222.
—— and other marine animals, report on the distribution and range in depth of, observed on the coasts of Spain, Portugal, Barbary, Malta, and Southern Italy, by R. M'Andrew, 1850, 264.
——, list of, for local museums, 1855, 114.
——, Mazatlan, list of the Reigen collection of, 1856, 243.
——, fossil, of the upper Silurians, 1859, 64.
——, Dr. Carpenter on the microscopic structure of the shells of, 1844, 1.
——, instructions for observing the periodic phenomena of, 1845, 329; 1850, 343.
——, *vide* Dredging, Shells, &c.
Molluscous animals, effect of metallic poisons on, 1843, 25.

Monatomic substances, G. C. Foster and Dr. Odling on, 1859, 3.
Monkeys, American, 1836, 137.
——, Dukhun, 1837, 246.
Monomorphous bodies, Prof. Johnston on, 1837, 175.
Monomyaria of the Ægean Sea, Prof. E. Forbes on the, 1843, 145, 192.
—— of Ireland, W. Thompson on the, 1843, 260; 1852, 293.
Moon, Greenwich observations of the, reports on the reduction of, 1838, 315; 1840, 423.
——, phenomena recorded by photography, by W. De la Rue, 1859, 140.
——, stereoscopic pictures of the, W. De la Rue on, 1859, 143.
——, its influence on the temperature of the air, by J. P. Harrison, 1857, 248; 1859, 193.
——, the old planets and their satellites, account of the principal observations, tables, &c. of the, 1831–32, 149.
Moon's surface, reports of committee on the physical character of the, as compared with that of the earth, 1853, 84; 1854, 415.
Morin's compteur, 1841, 308.
Morphology of plants, Dr. Lindley on the theory of, 1833, 50.
Mortality of large towns in Scotland, on the, 1842, 147.
Mosasaurus, fossil, British, Prof. Owen on, 1841, 144.
Moseley's indicator for steam-engines, 1841, 310.
Mosses, Prof. Henfrey on the reproduction of, 1851, 104, 122.
Moulting, the process of, in the Amphipoda, C. Spence Bate on, 1855, 41.
Mozambique languages, 1847, 193.
Mugilidæ, Irish, 1840, 388; British, 1844, 302.
—— of the China and Japan seas, Sir J. Richardson on the, 1845, 247.
—— of North America, Sir J. Richardson on the, 1836, 207, 211.
—— of New Zealand, Sir J. Richardson on the, 1842, 22.
Mullidæ of New Zealand, 1842, 17; of the China and Japan seas, 1845, 219.
Mural circle, Troughton's, 1831–32, 132.
Muriate of phosphuretted hydrogen, Prof. Johnston on the, 1831–32, 464.
Muriatic acid in springs connected with volcanos, Dr. Daubeny on, 1836, 27.
Muricidæ of the Ægean Sea, Prof. E. Forbes on the, 1843, 139, 190; South European, 1850, 267; North-east Atlantic, 1856, 133; West coast of North America, 1856, 343; British, 1850, 203, 226; 1860, 218.
Muridæ of North America, 1836, 154; Irish, 1840, 360.
Muscicapidæ of North America, 1836, 172; of Dukhun, 1837, 248; Irish, 1840, 366.
Muscular system in the freshwater Polyzoa, Prof. Allman on the, 1850, 314.
Museums, ornithological, 1844, 215.
——, local, on typical objects in natural history adapted to, 1855, 108; 1856, 461.
Mustelidæ of the seas of Japan and China, Sir J. Richardson on the, 1845, 195.
Myaceæ, Dr. Carpenter on the structure of the shells of, 1844, 4, 10; 1847, 103, 131.
Myliobatidæ of New Zealand and the China Sea, Sir J. Richardson on the, 1842, 30; 1845, 198.
Myodora, Dr. Carpenter on the structure of the shell of the, 1847, 103, 105, 131.
Myosotis, experiments on the growth of, by Prof. Buckman, 1859, 25; 1860, 42.
Myriapoda, on the state of our knowledge of the, by Rev. L. Jenyns, 1834, 204.
Mytilaceæ, Dr. Carpenter on the microscopic structure of the shells of, 1844, 20; 1847, 99.
Mytilidæ, Irish, 1843, 260; 1852, 293; 1857, 105; Ægean, 1843, 145; South European, 1850, 265; West coast of North America, 1856, 248; North-east Atlantic, &c., 1856, 111; British, 1850, 209, 235; 1860, 221.

Nais, Dr. T. Williams on the genus, 1851, 167, 177, 182, 218, 224, 238, 247, 252, 263.
Naphthaline, on preparing, 1831–32, 519.
Natatores of North America, 1836, 183, 196; of Dukhun, 1837, 251; of Ireland, 1840, 377; 1852, 291.
Natatoria (Amphipoda), British, C. Spence Bate on, 1855, 57.
Naticidæ, Irish, W. Thompson on the, 1843, 258; 1852, 292.
Natural history, instructions for the observation of periodical phenomena, 1845, 321.
—— history, report on typical objects in, adapted to local museums, 1855, 108; 1856, 461.
Nautilus, Dr. Carpenter on the structure of the shell of, 1847, 116.
Naval architecture, museum of, at Liverpool, 1857, 308.
——, *vide* Ships and Steam-ships.
Nayadeæ, Dr. Carpenter on the microscopic structure of the shells of, 1844, 21; 1847, 96.
Neæra of the Ægean Sea, Prof. E. Forbes on the, 1843, 143, 191.
Nebulæ, notices of observations of, by G. B. Airy, 1831–32, 146.
—— observed by Lord Rosse in his six-feet reflector, 1849, 53.
Nebulosity of the solar system, R. Mallet on the hypothesis of the, 1847, 56.
Needle, magnetic, Prof. Christie on its variation, 1833, 106; on the change in its direction, 107; on the diurnal change in the variation, 108; on the dip of, 109; on the variation of the dip, 110.

Needle, magnetic, on the change which takes place in the diurnal variation of the, in different months of the year, 1854, 357.
Nematoidea, British, 1860, 229.
——, Irish, 1843, 277.
Nemertina, Irish, W. Thompson on the, 1843, 271; 1852, 295.
Nemertinidæ, Dr. T. Williams on the, 1851, 238.
Nephthys, Dr. T. Williams on the genus, 1851, 174, 188, 199, 215, 235.
Nereidæ, Dr. T. Williams on the, 1851, 168, 174, 187, 191, 197, 211, 230.
——, British, 1860, 227.
Nereidina, Irish, W. Thompson on the, 1843, 273.
Nerine, Dr. T. Williams on the genus, 1851, 199, 213, 234.
Nervous system, Dr. W. C. Henry's report on the physiology of the, 1833, 59–91:—
Introduction. Cerebrum, 63; cerebellum, 68; medulla oblongata, 72; spinal marrow, 74; nerves, 80; the sympathetic or ganglionic system, 88.
—— system, report of committee on the pathology of the, 1836, 283.
—— system of the Annelida, 1851, 266.
—— system of the Amphipoda, 1855, 56.
Newton's rings, 1831–32, 316; 1834, 365; 1840, 136.
Nitrate of barytes and sulphate of magnesia, or sulphate of soda, or sulphate of zinc, or sulphate of copper, or sulphuric acid, heat of combinations of, 1849, 73, 74.
Nitric acid, Prof. Johnston on the action of sulphuretted hydrogen on, 1831–32, 460.
—— acid in mineral springs, Dr. Daubeny on, 1836, 28.
—— acid, solution of metals in, Dr. T. Andrews on, 1849, 74.
—— acid, solution of zinc in, heat of combination of, 1849, 75.
—— acid, solution of copper in, heat of combination of, 1849, 75.
Nitrogen, method of preparing, 1831–32, 455.
—— in thermal and cold springs, Dr. Daubeny on, 1836, 39, 71.
Nomenclature of anatomy, Prof. Owen on the, 1846, 169.
—— of the Annelida, Dr. T. Williams on the, 1851, 159.
——, mineralogical, Rev. Dr. Whewell on, 1831–32, 361.
——, zoological, report on, 1842, 105; 1843, 119.
—— of the stars, 1839, 172; 1840, 426; 1841, 44; 1843, 292; 1844, 32.
—— of organic compounds, Dr. Daubeny on the, 1851, 124.
Normalia (Amphipoda), British, C. Spence Bate on the, 1855, 57; 1860, 223.
Notation, chemical, 1831–32, 345, 445; 1835, 207.
Notidanidæ of the China Sea, Sir J. Richardson on the, 1845, 195.
Nototherium, fossil, of Australia, Prof. Owen on the, 1844, 231.
Nubian languages, 1847, 197.
Nucleobranchiata of the Ægean Sea, Prof. E. Forbes on the, 1843, 131, 186.
——, Irish, W. Thompson on the, 1843, 249.
Nucula, Ægean, Prof. E. Forbes on the, 1843, 145, 192.
——, Dr. Carpenter on the structure of the shell of the, 1847, 101, 131.
Nudibranchiata of the Ægean Sea, 1843, 133, 186; of Ireland, 1843, 250; 1852, 292; of the West coast of North America, 1856, 312; British, 1850, 241; 1856, 50; 1860, 220.
——, British, report on the, by J. Alder and A. Hancock, 1844, 24.
Nufi language, 1847, 174.
Numbers, theory of, report on the, by Prof. H. J. S. Smith, 1859, 228–267:—
Part I.
Theory of congruences, 230.
Definition of a congruence, 230.
Solution of a congruence, 230.
Systems of residues, 231.
Linear congruences, 231.
Systems of linear congruences, 232.
Fermat's theorem, 233.
Lagrange's limit of the number of roots of a congruence, 235.
Theory of the residues of powers, 235.
Primitive roots, 236.
Indices, 237.
Quadratic residues, 240.
Legendre's law of reciprocity, 241.
Jacobi's extension of Legendre's symbol, 242.
Gauss's first demonstration, 243.
—— second, third, and fifth demonstrations, 245.
—— fourth demonstration, 246.
—— sixth demonstration, 248.
Algorithm for the determination of the value of the symbol $\left(\frac{Q}{P}\right)$, 250.
Biquadratic residues, 251.
Theory of complex numbers, 252.
Fermat's theorem for complex numbers, 254.
Law of quadratic reciprocity for complex numbers, 254.
Reciprocity of biquadratic residues, 255.
Biquadratic residues — researches of Eisenstein, 256.
Application of the Lemniscate functions to the biquadratic theorem, 260.
Cubic residues, 264.
Part II., 1860, 120.
Residues of the higher powers.—Researches of Jacobi, 120.
Necessity for the introduction of ideal primes, 121.

Numbers, theory of, *continued.*
Elementary definitions relating to complex numbers, 122.
Complex units, 123.
Gauss's equations of the periods, 125.
The period-equations considered as congruences, 127.
Conditions for the divisibility of the norm of a complex number by a real prime, 129.
Definition of ideal prime factors, 130.
Elementary theorems relating to ideal factors, 131.
Classification of ideal numbers, 132.
Representation of ideal numbers as the roots of actual numbers, 133.
The number of classes of ideal numbers, 134.
Criterion of the divisibility of H by λ, 136.
"Exceptional" primes, 138.
Fermat's theorem for complex primes, 139.
M. Kummer's law of reciprocity, 140.
The theorems complementary to M. Kummer's law of reciprocity, 141.
Complex numbers composed of roots of unity, of which the index is not a prime, 145.
Application to the theory of the division of the circle, 147.
Application to the last theorem of Fermat, 148.
Application to the theory of numerical equations, 152.
Tables of complex primes, 153.
Solution of binomial congruences, 155.
Solution of the congruence $x^n \equiv 1$, mod p, 155.
Cubic and biquadratic congruences, 158.
Quadratic congruences—indirect methods of solution, 159.
General theory of congruences, 161.
Extension of Fermat's theorem, 163.
Imaginary solutions of a congruence, 165.
Congruences having powers of primes for their modules, 165.
Binomial congruences having a power of a prime for their modulus, 167.
Primitive roots of the powers of a prime, 168.
Case when the modulus is a power of 2, 168.
Composite modules, 168.
Binomial congruences with composite modules, 169.
Primitive roots of the powers of complex primes, 170.
Additions to Part I., 170.
Nutation, constant of, Rev. Dr. T. R. Robinson on the determination of the, by the Greenwich observations, 1837, 127.
Nutrition of animals, J. Blake on an important chemical law in the, 1846, 30.
Nymphaeas, Dr. Carpenter on the microscopic structure of the shells of the, 1847, 102.
Oats, on the transmutation of, by Prof. Buckman, 1857, 206; 1859, 30.
Observatory of Armagh and of Dublin, determination of the arc of longitude between the, 1839, 19.
——, Bombay, 1845, 75.
——, Cambridge, 1831–32, 129, 181.
——, Cape of Good Hope, 1831–32, 129; 1839, 172; 1841, 351; 1842, 4; 1844, 144.
——, Dublin, 1831–32, 129, 131.
——, Greenwich, 1831–32, 126, 129, 131.
——, Kew, 1843, xxxix; 1844, xlix, 120; 1845, 341; 1846, xvii; 1848, xvii; 1849, xvi, 80, 113; 1850, xx, 176; 1851, xxvii, 325, 328, 335; 1852, xxviii; 1853, xxix; 1854, xxvii; 1855, xxx; 1856, xxx; 1857, xxxi; 1858, xxxiii; 1859, xl, 200; 1860, xxxi; short description of the, xli.
——, Liverpool, report of the committee on the establishment of, 1838, 316.
——, Paramatta, 1831–32, 130.
——, Philadelphia, 1842, 209.
——, Senftenberg, 1845, 108.
——, Simla, 1845, 4.
——, St. Helena, 1841, 349, 352; 1844, 144.
——, Toronto, 1841, 340; 1842, 5; 1844, 144; 1848, 99.
——, Trevandrum, 1841, 347.
——, electrical, for transport, 1851, 338.
Observatories, a short general history of, by G. B. Airy, 1831–32, 126.
——, public, Prof. J. D. Forbes on, 1840, 143.
——, magnetic, British Colonial, on some of the results obtained at the, 1854, 355.
——, magnetic, of Russia, 1840, 432.
Odorin, Prof. Johnston on, 1831–32, 526.
Œnone, Dr. T. Williams on the genus, 1851, 210, 230.
Oil of bitter almonds, metamorphic, 1831–32, 503.
—— of turpentine, artificial camphor, analysis of, 1831–32, 512.
——, animal, substances obtained from, 1831–32, 526.
Oils, essential, Dr. Daubeny on the nomenclature of the, 1851, 127.
Olanin, Prof. Johnston on, 1831–32, 526.
Olbers's comet, 1831–32, 161.
Oliva, Dr. Carpenter on the microscopic structure of the shell of the, 1847, 109.
Onchus, fossil, Prof. Agassiz on, 1842, 87; 1843, 194, 195.
Oolitic Echinodermata, Dr. T. Wright on the stratigraphical distribution of the, 1856, 396.
—— system, Prof. Agassiz on the British fossil fishes of the, 1843, 199.
Opheliadæ, Dr. T. Williams on the, 1851, 216, 236.
——, British, 1860, 228.
Ophidia, American, 1838, 200.

Ophidia, fossil, Prof. Owen on the, 1841, 180; 1859, 166.
Ophiuroidea of Ireland, W. Thompson on the, 1843, 279.
—— of the Ægean Sea, Prof. E. Forbes on the, 1843, 148, 149.
——, Dr. Carpenter on the structure of the shell of, 1847, 126.
——, British, 1860, 230.
——, oolitic, Dr. T. Wright on the, 1856, 398, 402.
Opisthobranchiata of the West coast of North America, P. P. Carpenter on the, 1856, 312.
——, British, list of, 1860, 219.
Opium, immediate principles obtained from it, 1831–32, 513.
Optical properties of minerals, Rev. Dr. Whewell on, 1831–32, 335.
—— meteorology, Prof. J. D. Forbes on, 1840, 120.
Optics, report on the progress of, by Sir D. Brewster, 1831–32, 308.
——, physical, Rev. Dr. H. Lloyd's report on the progress of, 1834, 295–413:—
Part I. Unpolarized light, 297.
1. Propagation of light.—Principle of interference, 297.
2. Reflexion and refraction of light, 305.
3. Diffraction, 323.
4. Colours of thin and thick plates, 338.
Part II. Polarized light, 350.
1. Polarization.—Transversal vibrations, 350.
2. Reflexion and refraction of polarized light, 356.
3. Double refraction, 375.
4. Colours of crystalline plates, 395.
——, *vide* Light.
Orbicula, Dr. Carpenter on the microscopic structure of the shells of, 1844, 18.
Orchestidæ, British, C. Spence Bate on the, 1855, 57.
Ordnance survey of Scotland, memorial relative to the, 1851, 370.
Ordnance, report of committee on metals for, 1855, 100.
Organic bodies, influences of light on, list of memoirs, &c. on, 1850, 153.
—— chemistry, report on the progress of, by Prof. Johnston, 1831–32, 496.
—— chemistry applied to physiology and pathology, abstract of Liebig's report on, 1842, 42.
—— chemistry, report on the progress of, by G. C. Foster and Dr. Odling, 1859, 1.
—— compounds, Dr. Daubeny on the nomenclature of, 1851, 124:—
Introduction.
Part I. On the classes of organic bodies, 126.
Part II. On the terminations of the words designating the members of each class, 131.
Organic matter in springs, 1831–32, 521; 1836, 30.
—— matter, porous strata, and water, action of, on the air and water of towns, by Dr. R. A. Smith, 1851, 66.
—— and inorganic substances, R. Mallet on the action of heat of 212° Fahr. on, 1838, 313.
—— remains discovered in New Jersey, Delaware, and Alabama, Prof. H. D. Rogers on the, 1834, 61.
Ornithological works and monographs, Prof. Strickland's list of, 1844, 173.
Ornithology of North America, Sir J. Richardson on the, 1836, 164.
——, report on the progress of, by Prof. H. E. Strickland, 1844, 170–221:—
Introduction, 170.
1. General systematic works, 173.
2. Works descriptive of the ornithology of particular regions, 180.
3. Ornithological monographs, 196.
4. Miscellaneous descriptions of species, 199.
5. Progress of the pictorial art as applied to ornithology, 201.
6. Anatomy and physiology of birds, 204.
7. Fossil ornithology, 209.
8. Ornithological museums, 215.
9. Desiderata of ornithology, 217.
——, *vide* Birds.
Osler's anemometer, at Plymouth, 1838, 21; 1844, 241; at Birmingham, 1840, 321; at Edinburgh, 1840, 435; at Inverness, 1841, 329; 1842, 206; at Liverpool, 1855, 127.
—— anemometer, description of, 1844, 253, 258; 1846, 343.
Osmium, salts of, on their action when introduced into the blood, by J. Blake, 1846, 27.
Osteolepis, fossil, Prof. Agassiz on, 1842, 87; 1843, 194.
Osteology of fish, Prof. Agassiz on the, 1844, 285.
—— of man, Prof. Owen on the, 1846, 169.
Ostinopterygii [Ossei] of the China and Japan seas, Sir J. Richardson on the, 1845, 199, 317.
Ostraceæ, Dr. Carpenter on the microscopic structure of the shells of the, 1844, 19.
Ostracoda, British, 1860, 225.
Ostrapoda, Irish, W. Thompson on the, 1843, 270; 1852, 294.
Ostreadæ, Ægean, 1843, 146; Irish, 1843, 260; 1857, 105, 107, 108, 109; British, 1860, 220; South European, 1850, 265; of the West coast of North America, 1856, 312.
Ostrich, Prof. Owen on the skull of the, 1846, 190, 200, 201, 224.
Otter of North America, 1836, 145; Irish, 1840, 359.
Ox, British, fossil remains of, Prof. Owen on the, 1843, 233.

Oxacids of cyanogen, Prof. Johnston on the, 1831–32, 467.
Oxalic acid and acetate of barytes, or acetate of lead, Dr. T. Andrews on the heat of combinations of, 1849, 74.
Oxamid, Prof. Johnston on, 1831–32, 505.
Oxide of bismuth, Prof. Johnston on the, 1831–32, 478.
—— of zinc, Prof. Johnston on, 1831–32, 477.
Oxides, use of isomorphism in determining the compositions of, Prof. Johnston on, 1831–32, 422.
—— of chlorine and iodine, 1831–32, 465.
Oxygen in thermal waters, Dr. Daubeny on, 1836, 42, 79.
—— gas, combustions in, Dr. T. Andrews on the heat produced by, 1849, 76.
Oyster-beds and oysters of the British shores, first report on the, by T. C. Eyton, 1856, 368.
Ozone, Prof. Schönbein on, 1840, 214; 1845, 91.

Pachyderm, Prof. Owen on the skull-bones of a, 1846, 297.
Pachydermata of North America, Sir J. Richardson on the, 1836, 159.
——, fossil, British, Prof. Owen on the, 1843, 208.
——, descriptions of certain fossils indicative of the former existence in Australia of large marsupial representatives of the, by Prof. Owen, 1844, 223.
Paints and varnishes to prevent the corrosion of iron, on, 1838, 287; 1840, 238–246; 1843, 19, 23.
Palæontology, Rev. W. D. Conybeare's report on, 1831–32, 402.
——, *vide* Geology.
Palæophis toliapicus, Prof. Owen on, 1841, 180.
Palæosaurus cylindrodon, Prof. Owen on, 1841, 1; P. platyodon, 154.
Palæotherium, fossil, British, Prof. Owen on, 1843, 225.
Palladium, chloride of, Dr. J. Blake on its influence when injected into the veins, 1845, 83.
Pallas, planet, discovery of, 1831–32, 157.
Palliobranchiata, Dr. Carpenter on the microscopic structure of the shells of the, 1844, 16.
Palmic and elardic acids, Prof. Johnston on, 1831–32, 505.
Paludicella, Prof. Allman on the polyzoon, 1850, 337.
Paludinidæ of the West coast of North America, P. P. Carpenter on the, 1856, 326.
Pandora, Dr. Carpenter on the structure of the shell of, 1847, 105, 132.
Paper ruled in squares, report of committee on, 1840, 436.
Papilionaceous plants, experiments on the growth of, by Prof. Buckman, 1857, 208.
Parabola, Rev. Dr. J. Booth on the trigonometry of the, 1856, 68.
Paraffin, Prof. Johnston on, 1831–32, 519, 527.
Paranthine, green, from Arendal, analysis of, 1844, 165.
Paratartaric acid, Prof. Johnston on, 1831–32, 500.
Parexus recurvus, fossil, 1843, 194.
Parhelia and halos, Prof. J. D. Forbes on, 1840, 130.
Parsnips, wild, experiments on the growth of, by Prof. Buckman, 1857, 212; 1859, 29; 1860, 37.
Parthenia of the Ægean Sea, 1843, 136, 188; Irish, 1843, 255; West coast of North America, 1856, 334.
Patella lævis and P. pellucida, C. W. Peach on, 1843, 129.
——, Dr. Carpenter on the structure of the shell of the, 1847, 113, 132.
Patellidæ of the Ægean Sea, 1843, 135, 188; Irish, 1843, 258; of the North-east Atlantic, 1856, 146; of the West coast of North America, 1856, 318; of Strangford Lough, 1857, 106, 107, 109.
Patent laws, report of committee on the, by W. Fairbairn, 1858, 164; 1859, 191.
Pathology, organic chemistry applied to, 1842, 42.
——, on the effects of acrid poisons on the mucous membrane, 1835, 211, 235.
Pectic acid, Dr. Schunck on, 1847, 143.
Pectinibranchiata of the Ægean Sea, 1843, 136, 188; of Ireland, 1843, 254; 1852, 292; South European, 1850, 266; North-east Atlantic, 1856, 146; of the West coast of North America, 1856, 323; British, 1860, 218.
——, Dr. Carpenter on the structure of the shells of the, 1847, 112, 116.
Pectinibranchii of North America, 1836, 204; of Ireland, 1840, 384; 1852, 291; of New Zealand, 1842, 15; British, 1844, 302; of the Seas of China and Japan, 1845, 221.
Pectinidæ of Ireland, 1843, 260; 1852, 293; of the Ægean Sea, 1843, 146, 192; South European, 1850, 265; of the West coast of North America, 1856, 311; British, 1860, 220.
——, Dr. Carpenter on the microscopical structure of the shells of, 1844, 19; 1847, 95, 130.
Pectunculus, Dr. Carpenter on the structure of the shell of, 1847, 101.
Pedicellariæ, Dr. Carpenter on the, 1847, 125.
Pegasidæ of the China and Japan seas, Sir J. Richardson on the, 1845, 202.
Pelagidæ, British, 1860, 233.
Pelecanidæ of North America, 1836, 184; of Dukhun, 1837, 251; Irish, 1840, 380.
Pendulum experiments, G. B. Airy on, 1831–32, 165.
Pentacrinidæ, oolitic, 1856, 403.

Pentacrinus, Dr. Carpenter on the structure of the shell of, 1847, 126, 134.
Peracle, the, Prof. E. Forbes on, 1843, 186.
Perchloric acid, Prof. Johnston on, 1831–32, 466.
Perchlorine ether, Prof. Johnston on, 1831–32, 519.
Percidæ of North America, 1836, 204, 208; Irish, 1840, 384; 1852, 290; British, 1844, 302; of New Zealand, 1842, 15; of New Holland, 1842, 17; of the China and Japan seas, 1845, 221.
——, fossil, 1843, 205; of the London clay, Prof. Agassiz on, 1844, 286, 307.
Percina of the China and Japan seas, Sir J. Richardson on the, 1845, 210, 319.
Periodic phenomena of plants and animals, reports on the registration of, 1845, 321; 1849, 78; 1850, 338–357.
Periodopharyngei of the China and Japan seas, Sir J. Richardson on the, 1845, 247.
Permian system, Prof. Agassiz on the British fossil fishes of the, 1843, 198.
—— magnesian limestones, A. Gages on the, 1859, 66.
Perna, Dr. Carpenter on the microscopic structure of the shells of, 1844, 9, 20.
Peroxalate of iron, Prof. Johnston on the action of light upon, 1831–32, 482.
Persulphuret of tellurium, Prof. Johnston on, 1831–32, 474.
Peruvian bark, mode of testing, 1831–32, 508.
Petromyzidæ of North America, 1836, 222; Irish, 1840, 399; of New Zealand, 1842, 30.
Phaneropleuron Andersoni of the Dura Den yellow sandstone, 1860, 33.
Pharyngognathi of the China and Japan seas, Sir J. Richardson on the, 1845, 255, 320.
Phascolotherium, fossil, British, Prof. Owen on the, 1842, 73.
Phasianidæ or Pavonidæ, North American, 1836, 180; of Dukhun, 1837, 250.
Philological and physical researches, as applied to the history of the human species, by Dr. Prichard, 1831–32, 529.
Philology, Indo-German, Rev. Dr. J. W. Donaldson on two unsolved problems in, 1851, 138.
——, ethnographical, Dr. R. G. Latham on, 1847, 154:—
Part I. Africa.
I. The Woloff language, 159.
II. The Mandingo languages, 162.
III. The Feloop languages, 168.
IV. From Cape Mesurado to the Gaboon river, 168.
V. The Begharmi language, 182.
VI. The Bergoo or Mobba language, 183.
VII. The Bornu language, 184.
VIII. The Mandara language, 185.
IX. The Howssa languages, 185.
X. The Sungai language, 186.
Philology, ethnographical, *continued*.
XI. The Fulah group of languages, 188.
XII. The Caffre class of languages, 189.
XIII. The Hottentot language, 196.
XIV. The Nubian class of languages, 197.
XV. The Fazoglo languages, 202.
XVI. The Bisharye language, 204.
XVII. The Æthiopic class of languages, 204.
XVIII. The Agow languages, 205.
XIX. The Galla class of languages, 205.
XX. The Gonga class of languages, 206.
XXI. The Shangalla or Shankala languages, 207.
XXII. The Dalla language, 207.
XXIII. The Takue (or Boje) and Barea language, 208.
XXIV. The Coptic language, 210.
XXV. The Berber group of languages, 210.
XXVI. Unplaced languages, 213.
The Sereres language, 213.
XXVII. The Serawoolli or Seracolet language, 214.
XXVIII. The Akvambu language, 215.
XXIX. The Tibboo language, 215.
Geographical distribution of languages, 215.
On the relations between the higher groups of languages, 217.
——, *vide* Ethnology.
Philosophical memoirs, report of committee to consider the formation of a catalogue of the, 1856, 463.
Phocidæ, Irish, 1840, 362.
Pholas lamellata, C. W. Peach on, 1843, 129; P. dactylus and P. parva, 130.
Phosphates of lead, Prof. Johnston on the, 1831–32, 484.
Phosphoric acid, Prof. Johnston on, 1831–32, 457.
—— acid in mineral waters, Dr. Daubeny on, 1836, 19.
—— acid, J. Blake on its action when injected into the veins, 1843, 118.
Phosphorus, experiments with, by Prof. Schönbein, 1845, 92; on the phenomena it exhibits when placed in moist atmospheric air, 97.
—— in certain meteoric irons, W. W. Smyth on, 1849, 33.
—— and chlorine, sulphuret of, Prof. Johnston on, 1831–32, 463
Phosphuret of copper, Prof. Johnston on, 1831–32, 479.
Phosphuretted hydrogen, muriate, hydriodate, and hydrobromate of, Prof. Johnston on, 1831–32, 464.
Photo-barometrograph at the Kew observatory, description of the, 1851, 346.
Photochemical researches, by Prof. Bunsen of Heidelberg and Dr. H. E. Roscoe, 1856, 62:—

Photochemical researches, *continued.*
Introduction.
Photochemical induction, 65.
Reduction of the chemical action of light to an absolute measure, 67.
Photographic image, report on the state of our knowledge regarding the, by Messrs. Maskelyne, Hadow, Hardwich, and Llewelyn, 1859, 103.
—— process, wax-paper, employed for photometeorographic registrations at the Radcliffe observatory, by W. Crookes, 1859, 206; supplementary notes by C. Chambers, 220.
Photography, celestial, in England, report on the state of, by Warren De la Rue, 1859, 130:—
Part I.
Historical outline, 131.
The photographic picture compared with the optical image, 132.
Relative advantages of reflecting and refracting telescopes for photography, 133.
Actual process employed at the Cranford observatory, 133.
Desiderata in the machinery for driving the telescope, 138.
Degree of perfection hitherto attained in lunar photography, 139.
Lunar phenomena recorded by photography, 140.
Stereoscopic pictures of the moon, 143.
Value of photography in the production of selenographical charts, 147.
Photography of the planets, 147.
Loss of the actinic rays by reflexion, 149.
Part II.
Photoheliography at the Kew observatory, 149.
Photoheliograph of the Kew observatory, description of the, 1857, xxxiv; 1858, xxxiv.
Photometers, Prof. E. Forbes on, 1840, 61.
Phronomidæ, British, C. Spence Bate on the, 1855, 59.
Phyllodocidæ, Dr. T. Williams on the, 1851, 197, 211, 232, 266.
——, British, 1860, 227.
Phyllopoda, Irish, W. Thompson on, 1843, 269.
——, British, 1860, 225.
Physics in Belgium, M. Quetelet on the state of, 1835, 53.
Physiological action of medicines, report on the, by Dr. J. Blake, 1843, 115; 1845, 82; 1846, 27.
Physiology, animal, Prof. Clarke's report on, 1834, 95–142:—
Outline of theoretical physiology, 95.
The blood, 116; the corpuscles, 117; structure, 118; the lymph, or liquor sanguinis, 120; fibrin, serum, 120; gas, 123; analysis, 125; the powers which circulate the blood, 129.
Heart, 134; cause of the heart's action, 137.
—— of the nervous system, Dr. W. C. Henry on the, 1833, 59.
—— of the lungs and air-tubes, Dr. C. J. B. Williams on the, 1840, 411.
——, organic chemistry applied to, 1842, 42.
——, vegetable, on the reproduction of the higher cryptogamous plants, by Prof. Henfrey, 1851, 192.
Physophoridæ, British, 1860, 232.
Picidæ of North America, 1836, 177; of Dukhun, 1837, 249; Irish, 1840, 371.
Pictorial art as applied to ornithology, Prof. Strickland on, 1844, 201.
Pigs, on the food of, by J. B. Lawes and Dr. Gilbert, 1852, 327, 331, 338, 347; 1854, 422.
Pinna, Dr. Carpenter on the microscopic structure of the shell of, 1844, 4, 20; 1847, 95, 130.
Pisces, *vide* Fishes.
Placoidæ of the Devonian system, 1842, 87.
—— of the Silurian system, Prof. Agassiz on the, 1843, 194.
of the Devonian system, 194.
of the Carboniferous system, 195.
of the Permian system, 198.
of the Triassic system, 199.
of the Oolitic system, 199.
of the Cretaceous system, 203.
of the Tertiary system, 206.
—— of the London clay, 1844, 308.
Placunidæ, Dr. Carpenter on the microscopic structure of the shells of the, 1844, 18; 1847, 95.
Planets and their satellites, account of the principal observations, tables, &c. of the, by G. B. Airy, 1831–32, 149, 156.
——, perturbations of the, G. B. Airy on the, 1831–32, 149, 170.
—— and periodical comets, &c., history of the, by G. B. Airy, 1831–32, 156.
——, Greenwich observations of the, G. B. Airy's statement on the reduction of the, 1840, 423.
——, photography of the, W. De la Rue on the, 1859, 147.
Planet's orbit, A. Cayley on the problem of the variation of the elements of a, 1857, 1.
Plantigrada of North America, Sir J. Richardson on the, 1836, 141, 142.
—— of Dukhun, Col. Sykes on the, 1837, 246.
Plants, Dr. Lindley on the elementary organs, circulation, structure of the axis, cause of the formation of wood, arrangement of leaves, structure of leaves, anther, &c., origin of the pollen, fertilization, origin of organs, morphology, gradual development, irritability, action of coloured

light, colours, and excretions of, 1833, 27–57.
Plants, alpine, of Scotland, 1836, 258.
——, comparative view of the more remarkable, which characterize the neighbourhoods of Dublin, Edinburgh, and south-west of Scotland, &c., by J. T. Mackay and Prof. Graham, 1836, 253.
——, comparative geographical notices of the more remarkable, which characterize Scotland and Ireland, by J. T. Mackay, 1836, 257.
——, fruits, &c., of Dukhun, Col. Sykes on the, 1837, 239–245.
——, report on their growth in closed glass vessels, by J. Yates, 1837, 501; by Mr. Ward, 502; by Dr. Daubeny, 505.
——, researches on the influence of the solar rays on the growth of, by R. Hunt, 1842, 75; 1844, 29; 1846, 33; 1847, 17.
——, on the influence of the solar radiations on the vital powers of, growing under different atmospheric conditions, by Dr. Gladstone, 1852, 239; 1854, 373; 1855, 15.
——, reports on the influence of carbonic acid gas on, especially of those allied to the coal formations, 1848, 84, 97; 1849, 56; 1850, 159.
—— of the Ægean Sea, 1843, 169.
——, reports on the registration of periodical phenomena of, 1845, 321; 1849, 78; 1850, 338–357.
——, report on the engraving of skeleton maps for recording the distribution of, 1840, 445; 1841, 327.
——, fucoidal, Prof. Forchhammer on their influence upon the formations of the earth, 1844, 155; on the constituent parts of the ashes of, 158.
——, list of, for observing the periods of foliation and defoliation, 1845, 331; 1850, 338.
——, list of, for observing the periods of flowering and ripening of the fruit, 1845, 332; 1850, 339.
——, list of, for observing the hours of opening and closing their flowers, 1845, 334; 1850, 341.
——, list of, whose seeds have germinated at considerable ages, 1850, 168.
—— obtained by dredging, Prof. Forbes on, 1850, 246.
——, higher cryptogamous, Prof. Henfrey on the reproduction and supposed existence of sexual organs in the, 1851, 102.
——, report of experiments on the growth of, in the garden of the Royal Agricultural College, Cirencester, by Prof. Buckman, 1857, 200:—
The grasses, 201.
Cereal grasses—corn crops, 206.
Papilionaceous plants, 208.
Green feeding crops, 210.
Plants, report on growth of, *continued*.
Esculent vegetables, 211.
Economic and medicinal plants, 213.
Weeds, 214.
Flowering and ornamental plants, 215.
——, *continued*, 1859, 22.
Cultivation of flax or linseed, 22.
Dodder (Cuscuta epilinum), 23.
Rosa spinosissima and R. Doniana, 24.
Viola odorata, 24.
Myosotis, 25.
Datura tatula (purple thorn-apple), 25.
—— stramonium (American thorn-apple), 26.
Dipsacus sylvestris and D. fullonum, 26.
Carduus tuberosus and C. acaulis, 26.
Yellow globe mangel wurzel, 27.
Indian rape, 27.
Brassica oleracea, 28.
Trigonella fœnum-græcum, 28.
Vicia angustifolia, 29.
Scorzonera.—Salsafy, 29.
Dioscorea batatas (potato yam), 29.
Tamus communis, 29.
Parsnips, 29.
Grasses, 29.
——, *continued*, 1860, 34.
Grasses, 35.
Crop plants, 37.
Weeds, &c., 39.
——, fossil, of the upper Silurians of Lesmahago, 1859, 64.
Platemys Bowerbankii, Prof. Owen on, 1841, 163; P. Bullockii, 164; P. Mantelli, 167.
Platessoideæ of the China and Japan seas, Sir J. Richardson on the, 1845, 277.
—— of New Zealand, Sir J. Richardson on, 1842, 27.
Platinum, hydrocarburetted chlorides of, Prof. Johnston on, 1831–32, 483.
——, salts of, their action when injected into the veins, 1845, 83.
Platygnathus, fossil, Prof. Agassiz on the, 1842, 87.
Plectognathi of New Zealand, Sir J. Richardson on the, 1842, 28.
—— of North America, Sir J. Richardson on the, 1836, 220.
——, Irish, 1840, 396; 1852, 292; British, 1844, 303.
—— of the China and Japan seas, Sir J. Richardson on the, 1845, 199, 317.
Pleiocene, newer, of St. Mary's County, Maryland, North America, Prof. H. D. Rogers on the, 1834, 33.
——, older, and Meiocene formations of North America, Prof. H. D. Rogers on the, 1834, 35.
Plesicsaurus, Prof. Owen on the characters of the genus, 1839, 49; species:—
Hawkinsii, 57.
dolichodeirus, 60.

Plesiosaurus, *continued.*
macrocephalus, 62.
brachycephalus, 69.
macromus, 72.
pachyomus, 74.
arcuatus, 75.
subtrigonus, 77.
trigonus, 78.
brachyspondylus, 78.
costatus, 80.
dœdicomus, 81.
rugosus, 82.
grandis, 83.
trochanterius, 85.
affinis, 86.
Plesiomorphism, Prof. Johnston on, 1831–32, 429; 1837, 182.
Pleurobranchaceæ of the Ægean Sea, 1843, 134, 187; of Ireland, 1843, 251; of the West coast of North America, 1856, 313.
Pleuronectes, Prof. Owen on the endo- and exo-skeletal elements of a caudal vertebra of a, 1846, 252.
Pleuronectidæ, Irish, 1840, 394; 1852, 292; British, 1844, 303.
—— of North America, 1836, 218; of New Zealand, 1842, 27; of the China and Japan seas, 1845, 277.
Pleurotoma of the Ægean Sea, 1843, 139, 190; Irish, 1843, 257; South European, 1850, 267; West coast of North America, 1856, 330.
Pliny on earthquakes, 1850, 9.
Pliosaurus brachydeirus, fossil, British, Prof. Owen on, 1841, 60; P. trochanterius, 60.
Plumatella, Prof. Allman on the polyzoon, 1850, 305, 330.
Pluvio electrometer of the Kew observatory, 1844, 141.
Poa aquatica, &c., Prof. Buckman on the growth of, 1857, 203; 1859, 30; 1860, 36.
Podophthalma, Irish, 1843, 267; 1852, 293; 1857, 112; 1858, 265; 1859, 81; British, 1850, 243; 1860, 222.
——, typical list of, for local museums, 1855, 119.
Podosomata, British, 1860, 226.
——, Irish, 1843, 270.
Poikilopleuron Bucklandi, Prof. Owen on, 1841, 84.
Poiseuille's hæmadynamometer, 1840, 412.
Poisons, acrid, report on the effects of, by Dr. Hodgkin and Dr. Roupell, 1835, 211–233:—
Introduction.
The modus operandi of poisons, 220.
Inferences to be drawn from the situation of the principal lesion of the stomach in poisoning, 221.
Cases and experiments, 225.
——, acrid, Dr. Roupell's further report on, 1835, 235.
——, report on, by Dr. Roupell, 1841, 26:—
Poisons, report on, *continued.*
Introduction.
Exp. I. To show the effect of carbonic acid injected into the veins, 28.
Exp. II. To show the effects of carbonic acid when thrown into the carotid artery, 28.
——, contagious, Dr. W. Henry on, 1834, 73.
——, on the action of isomorphous substances when introduced into the blood, &c., by J. Blake, 1843, 115; 1845, 82; 1846, 27.
——, metallic, R. Mallet on their effect on molluscous or testaceous animals, 1843, 25.
Poisson's (M.) theory of the conduction of heat, 1841, 9, 11.
—— theory of waves at the surface of water, 1833, 143.
—— theory of capillary action, 1843, 284.
Polarization of light, Rev. Dr. Lloyd on the, 1834, 350.
—— of heat, Rev. Prof. Powell on, 1840, 21, 23, 25, 28, 30.
—— by reflexion, Rev. Prof. Powell on, 1831–32, 275.
—— by electricity, Prof. Schönbein on the phenomena of, 1840, 212.
—— of sky-light, Prof. J. D. Forbes on the, 1840, 124.
Pollen, Prof. Lindley on the origin of, 1833, 44.
Polyatomic compounds and formulæ, G. C. Foster and Dr. Odling on, 1859, 2.
Polymerism, Prof. Johnston on, 1831–32, 435; polymeric substances, 439.
Polynemidæ of the China and Japan seas, Sir J. Richardson on the, 1845, 218.
Polynoë, Dr. T. Williams on the, 1851, 201, 217, 237.
Polypi, Rev. L. Jenyns on the state of our knowledge of the, 1834, 236.
Polypoda, Irish, W. Thompson on, 1843, 272.
Polyptychodon, fossil, British, Prof. Owen on, 1841, 156.
Polyzoa, freshwater, report on the state of knowledge of the, by Prof. Allman, 1850, 305:—
Introduction.
Anatomy—Definition of terms, 307.
I. Organs for the preservation of the individual, 307.
A. Dermal system.
B. Organs of digestion.
C. Organs of respiration and circulation.
D. Muscular system.
E. Organs of the life of relation.
II. Organs for the preservation of the species.—Embryology, 320.
1. Reproduction by gemmæ.
2. Reproduction by ova.
3. Reproduction by free embryos.
Zoographical outline.—Diagnosis of genera and species, and synonymy, 326.

Polyzoa, British marine, list of, compiled by R. M'Andrew, 1860, 203; Infundibulata, 230.
——, Irish, 1857, 237; 1858, 287, 293.
——, list of, for local museums, 1855, 117.
——, *vide* Bryozoa.
Pomacentridæ of the China and Japan seas, Sir J. Richardson on the, 1845, 253.
Porifera, British marine, list of, compiled by R. M'Andrew, 1860, 235.
Poromya, Ægean, Prof. E. Forbes on the, 1843, 143, 191.
Potash and ammonia, Prof. Johnston on the isomorphism of, 1831–32, 431.
—— and soda, Prof. Johnston on the relation of the forms of, 1831–32, 427.
—— from felspar and mica, 1831–32, 475.
——, rubiacate of, E. Schunck on, 1848, 66.
Potassa and lithia in mineral waters, Dr. Daubeny on, 1836, 16.
Potato yam, wild potato, and the yellow Lima potato, Prof. Buckman on the growth of, 1857, 211; 1859, 29; 1860, 43.
Pouillet's pyrheliometer, 1840, 62.
Preservation of animal and vegetable substances, report of the committee for the, 1840, 421; 1842, 40.
Printing for the blind, W. Taylor on the various modes of, 1837, 87; mathematics, 96; music, 97; a comparison between the advantages and disadvantages of the common Roman and arbitrary alphabets, 98.
Prosobranchiata of the West coast of North America, P. P. Carpenter on the, 1856, 316.
——, British, list of, 1860, 218.
Protozoa, British marine, list of, compiled by R. M'Andrew, 1860, 234.
Pseudomorphous and epigene crystals, Prof. Johnston on, 1837, 194; list of pseudomorphous mineral substances, 195.
Psittacidæ of North America, Sir J. Richardson on, 1836, 177.
Pterichthys, fossil, Prof. Agassiz on, 1842, 87; 1843, 195.
Pterodactylus macronyx, Prof. Owen on, 1841, 156.
Pteropoda, Rev. L. Jenyns on the, 1834, 223.
—— of the Ægean Sea, Prof. E. Forbes on the, 1843, 131, 132.
——, Irish, W. Thompson on, 1843, 249.
—— of the North-east Atlantic, &c., R. M'Andrew on the, 1856, 114, 144.
——, British, 1850, 260; list of, compiled by R. M'Andrew, 1860, 220.
——, list of, for local museums, 1855, 116.
Pterosauria, fossil, British, Prof. Owen on, 1841, 156.
——, fossil, Prof. Owen on the, 1859, 162.
Ptychacanthus dubius, fossil, Prof. Agassiz on, 1842, 87.
Pulmobranchiata, Dr. Carpenter on the structure of the shell of the, 1847, 115.
Pulmonata of the West coast of North America, P. P. Carpenter on the, 1856, 313.
Pulmonifera, report on the distribution of the, in the British Isles, by Prof. E. Forbes, 1839, 127:—
1. On the various influences which affect their distribution, 127.
2. On their distribution in the various provinces of the British Isles, 131.
3. On the relations of the British Pulmonifera to those of Europe generally, and the distribution of the more remarkable species, 140.

Table of the species inhabiting the British Isles, and their geographical distribution, 144.
—— of the Ægean Sea, 1843, 136; Irish, 1843, 252; 1852, 292; West coast of N. America, 1856, 313; South European, 1850, 268 *et seq.*
Purpura lapillus, C. W. Peach on, 1843, 129.
Purpuric acid, Prof. Johnston on, 1831–32, 525.
Putorius, fossil, British, Prof. Owen on, 1842, 70.
Pycnogonidæ, Irish, W. Thompson on the, 1843, 270.
——, British, 1860, 226.
Pyloridæ of the Ægean Sea, 1843, 143, 191; Irish, 1843, 263; British, 1850, 230; 1860, 221; of the North-east Atlantic, 1856, 102.
Pyrheliometer, Pouillet's, 1840, 62.
Pyro-alizaric acid, Dr. Schunck on, 1848, 66.
Pyrometer, Houldsworth's, 1844, 107, 109.
Pyroracemic, pyroparatartaric acid, Prof. Johnston on, 1831–32, 501.
Pyrotartaric acid, Prof. Johnston on, 1831–32, 501.
Pyrrhine, Dr. Daubeny on, 1836, 1, 2.
Python, Prof. Owen on the cranium of a, 1846, 194, 220.

Quadrumana of North America, 1836, 137; of Dukhun, 1837, 246.
——, fossil, British, Prof. Owen on the, 1842, 55.
Quilimani language, 1847, 193.
Quinin, sulphate of, test for cinchonin in, 1831–32, 509.

Radiant heat, reports on, by Rev. Prof. Powell, 1831–32, 259; 1840, 1; 1854, 337.
Radiata, Rev. L. Jenyns on the state of our knowledge respecting the, 1834, 227.
——, report of committee for procuring drawings illustrative of the species of, 1840, 444.

Radiata of the Ægean Sea, report on the, by Prof. E. Forbes, 1843, 146:—
Arachnodermata, 146.
Echinodermata, 148.
Zoophyta, 151.
Amorphozoa, 152.
Provinces of depth, 176.
—— of the Frith of Clyde, 1856, 51.
——, Irish, 1843, 275, 279; 1852, 295; 1857, 111; 1858, 179, 286.
——, list of, for local museums, 1855, 121.
——, British, taken on the Southern and Western coasts of England, and Northern and Western coasts of Scotland, 1850, 211, 239.
——, British, list of, 1860, 229.
——, oolitic, Dr. T. Wright on, 1856, 396.
——, *vide* Dredging.
Radiation of heat, Rev. Dr. Whewell on the mathematical theories of the, 1835, 17.
—— of heat, Dr. H. Hudson on the, 1835, 163; Rev. Prof. Kelland on the, 1841, 2.
——, solar or terrestrial, Prof. J. D. Forbes on, 1831–32, 222; 1840, 60.
——, solar, on the chemical action of the, by R. Hunt, 1850, 137; 1852, 262; 1853, 68; list of bodies susceptible of chemical change, 1850, 150.
——, solar, Dr. Gladstone on its influence on plants, 1852, 239; 1854, 373; 1855, 15.
Raidæ, North American, Sir J. Richardson on the, 1836, 222.
—— of the seas of China and Japan, Sir J. Richardson on the, 1845, 195, 197.
——, Irish, W. Thompson on, 1840, 398.
—— of New Zealand, Sir J. Richardson on the, 1842, 29.
—— of the Oolitic system, 1843, 201.
—— of the Tertiary system, 1843, 206.
—— of the London clay, 1844, 308.
Railway constants, report of the committee on the determination of the mean numerical values of, by Dr. Lardner, 1838, 197–252; 1841, 205; by E. Woods, 247; Appendix, 268.
—— suspension bridges, C. Vignoles and P. W. Barlow on, 1857, 154, 238; 1858, 293.
—— trains, experiments on breaks for, by W. Fairbairn, 1859, 76.
—— structures, W. Fairbairn on the effect of vibratory action and long-continued changes of load upon wrought-iron girders, 1860, 45.
—— excavations, reports on coloured drawings of the sections of strata exposed in, 1841, 333; 1842, 38; 1843, 295.
Railways, Rev. Prof. Moseley, Prof. E. Hodgkinson, and J. Enys on a constant indicator for steam-engines, 1841, 307; 1842, 98.
——, report on railway-bar corrosion, by R. Mallet, 1849, 88.
Railways, W. Fairbairn on the strength of locomotive boilers and the causes which lead to explosion, 1853, 53.
Rainbow, Prof. J. D. Forbes on the, 1840, 125.
Rain, Prof. J. D. Forbes on, 1831–32, 249; 1840, 111.
——, third report on the quantities falling at different elevations at York, by W. Gray and Prof. Phillips, 1835, 171 (for first and second Reports, *vide* "Rain," Index of Subjects, Sections).
—— in Dukhun, Col. Sykes on the fall of, 1837, 236.
—— in Bengal, Col. Sykes on the fall of, 1852, 252.
—— at Birmingham, W. Wills on the fall of, 1852, 298.
—— at Southampton, J. Drew on, 1851, 58.
Rain-gauge at the Liverpool observatory, account of the, by A. F. Osler, 1855, 127.
—— and vapour-gauge of the Kew observatory, 1844, 128; 1851, 341.
Rain-water, on, 1836, 2; 1848, 21; 1851, 70, 77.
Rallidæ of North America, 1836, 183; of Dukhun, 1837, 250; Irish, 1840, 376; 1852, 291.
Ramphastidæ of N. America, 1836, 177.
Rana, North American, Sir J. Richardson on the, 1836, 201.
—— boans (great bull-frog), Prof. Owen on the cranium of the, 1846, 213.
Rape-seed, Indian, on, 1859, 27.
Raphiosaurus subulidens, Prof. Owen on, 1841, 145.
Raptores of North America, Sir J. Richardson on the, 1836, 168, 191.
—— of Dukhun, Col. Sykes on the, 1837, 248.
—— of Ireland, W. Thompson on the, 1840, 364; 1852, 291.
Rasores of North America, Sir J. Richardson on the, 1836, 180, 195.
—— of Dukhun, Col. Sykes on, 1837, 250.
—— of Ireland, W. Thompson on the, 1840, 372; 1852, 291.
Rats of North America, 1836, 154.
Red sandstone, lower new, at Collyhurst, near Manchester, report on the excavation made at the junction of the coal-measures with the, by E. W. Binney, 1843, 241.
Reflexion of heat, Rev. Prof. Powell on the, 1840, 10, 32.
—— and refraction of light, Rev. Dr. Lloyd on the, 1834, 305; of polarized light, 356.
Refraction, G. B. Airy on, 1831–32, 136, 186.
—— and double refraction, Sir D. Brewster on, 1831–32, 308, 310.
——, double, Rev. Dr. Lloyd on, 1834, 375.
—— of heat, on the, 1840, 2, 7; 1854, 341.

Refractive indices for the standard rays of the solar spectrum in different media, Rev. Prof. Powell on the, 1839, 1.
Registration of deaths, report on, 1835, 251.
Reichenbach's circle, 1831–32, 133.
—— water-pressure engine, 1848, 12.
Reptiles, Rev. L. Jenyns on the state of knowledge respecting, 1834, 172.
—— of Ireland, W. Thompson on the, 1840, 383, 406.
—— of North America, Sir J. Richardson on the, 1836, 197.
—— of Dukhun, Col. Sykes on the, 1837, 251.
——, on the skull of, by Prof. Owen, 1846, 190, 203.
——, list of, for observing the periodical phenomena of, 1845, 329, 336; 1850, 342.
——, fossil, British, Prof. Owen's report on, 1839, 43–126:—
Introduction.
Part I. Enaliosauria, general characters of the order, 45.
Characters of the genus Plesiosaurus, 49.
Plesiosaurus Hawkinsii, 57.
—— dolichodeirus, 60.
—— macrocephalus, 62.
—— brachycephalus, 69.
—— macromus, 72.
—— pachyomus, 74.
—— arcuatus, 75.
—— subtrigonus, 77.
—— trigonus, 78.
—— brachyspondylus, 78.
—— costatus, 80.
—— dœdicomus, 82.
—— rugosus, 82.
—— grandis, 83.
—— trochanterius, 85.
—— affinis, 86.
Characters of the genus Ichthyosaurus, 86.
Ichthyosaurus communis, 108.
—— intermedius, 110.
—— platyodon, 112.
—— lonchiodon, 116.
—— tenuirostris, 117.
—— acutirostris, 121.
—— latifrons, 122.
—— latimanus, 123.
—— thyreospondylus, 124.
—— trigonus, 124.
Concluding observations, 125.
——, Part II. 1841, 60:—
Pliosaurus, 60.
Order Crocodilia:—
Crocodilus Spenceri, 65.
Suchosaurus cultridens, 67.
Goniopholis crassidens, 69.
Teleosaurus, 72.
—— Chapmanni.
—— Cadomensis.
—— asthenodeirus.
Steneosaurus, 82.
—— brevirostris (rostro-minor), 82.
Reptiles, fossil, *continued* (1841).
Poikilopleuron Bucklandi, 84.
Streptospondylus, 88.
—— Cuvieri, 88.
—— major, 91.
Cetiosaurus, 94.
—— brevis, 94.
—— brachyurus, 100.
—— medius, 100.
—— longus, 101.
Order Dinosauria, 102:—
Megalosaurus, 103.
—— Bucklandi, 103.
Hylæosaurus armatus, 111.
Iguanodon Mantelli, 120.
Order Lacertilia, 144:—
Mosasaurus, 144.
—— Hofmanni, 144.
Leiodon, 144.
—— anceps, 144.
Raphiosaurus, 145.
—— subulidens, 145.
Lacerta, sp. ind., eocene, 145.
——, sp. ind. (allied to Scincus), oolite, 145.
Rhynchosaurus, 145.
—— articeps, 145.
Thecodonts, 153.
Thecodontosaurus antiquus, 153.
Palæosaurus cylindrodon, 154.
—— platyodon, 154.
Cladyodon Lloydii, 155.
Order Pterosauria:—
Pterodactylus macronyx, 156.
——, sp. ind., 156.
Sauria incertæ sedis:—
Polyptychodon, 156.
Rysosteus, 159.
Order Chelonia:—
Testudinidæ, 160.
Testudo Duncani, 160.
——, sp. ind., oolite, 160.
Emydidæ, 160.
Emys testudiniformis, 160.
Platemys Bowerbankii, 163.
—— Bullockii, 164.
—— Mantelli, 167.
Tretosternon punctatum, 165.
Emys, sp. ind., Kimmeridge clay, 168.
——, sp. ind., new red sandstone, 168.
Trionyx, 168.
——, sp. ind., 168.
Chelonidæ, 168.
Chelone planiceps, 169.
—— obovata, 170.
——, sp. ind., Wealden, 172.
—— pulchriceps, 172.
—— Benstedi, 173.
—— longiceps, 177.
—— planimentum, 178.
—— breviceps, 178.
—— convexa, 178.
—— suberistata, 179.
—— latiscutata, 179.

Reptiles, fossil, *continued* (1841).
Order Ophidia, 180:—
Palæophis toliapicus, 180.
Order Batrachia, 181:—
Labyrinthodon salamandroides, 183.
—— leptognathus, 183.
—— pachygnathus, 186.
—— ventricosus, 183.
—— scutulatus, 188.
Summary, 191.
Errata, 204.
——, fossil and recent, on the orders of, and their distribution in time, by Prof. Owen, 1859, 153:—
Introduction.
Order I. Ganocephala, 155.
II. Labyrinthodontia, 158.
III. Ichthyopterygia, 159.
IV. Sauropterygia, 159.
V. Anomodontia, 161.
VI. Pterosauria, 162.
VII. Thecodontia, 163.
VIII. Dinosauria, 164.
IX. Crocodilia, 164.
X. Lacertilia, 165.
XI. Ophidia, 166.
XII. Chelonia, 166.
XIII. Batrachia, 166.
Resinous substances, list of, 1831-32, 516.
Resins and gum-resins, Prof. Johnston on the, 1831-32, 512; basic, 513; subresins, 513.
——, E. Schunck on the, 1848, 57, 67, 68.
——, Dr. Daubeny on the nomenclature of, 1851, 127.
Resistance of air, Prof. E. Hodgkinson on the mode of conducting experiments on the, 1842, 211.
—— of air, on the theory of the, by Rev. Prof. Challis, 1833, 149; 1856, 251.
—— of fluids, on the theory of the, by Rev. Prof. Challis, 1833, 149; 1836, 251.
Respiration, Dr. W. C. Henry on the action of the medulla spinalis and oblongata on, 1833, 73.
——, Liebig's theory of, 1842, 51.
Respiratory organs, Dr. C. J. B. Williams on the, 1840, 411.
Rhinoceros, fossil, British, Prof. Owen on, 1843, 220.
Rhizocarpeæ, Prof. Henfrey on the reproduction of, 1851, 116, 122.
Rhizostomidæ, British, 1860, 233.
Rhynchonellidæ of the West coast of North America, 1856, 298; North-east Atlantic, 1856, 114; British, 1860, 222.
Rhynchorhinus of the London clay, Prof. Agassiz on, 1844, 295.
Rhynchosaurus, fossil, British, Prof. Owen on, 1841, 145.
Richardson's tubular life-boat, 1854, 333.
Rissoa of the Ægean Sea, 1843, 137, 189; Irish, 1843, 255; 1852, 293; British, 1850, 202, 223; 1860, 219; South European, 1850, 265; of the North-east Atlantic, 1856, 148.
Ritchie's (Dr.) instrument for showing that the absorptive power of surfaces is precisely proportional to their radiating power, 1831-32, 265.
River Humber, J. Oldham on the physical features of the, 1853, 36.
—— Mersey, provisional report on the effects produced upon the channels of the, by alterations made in its banks, 1855, 143; report of the committee, 1856, 1.
—— Mississippi, on changes in the, 1834, 9.
—— Rhine, on the phenomena exhibited in different parts of its course, 1834, 462.
—— Thames, on the course, dimensions, inclinations, and velocities of the, by G. and J. Rennie, 1834, 486 (with a section from the river Kennet to the Nore Light).
—— steamers, in reference to shallow-water navigation, A. Henderson on, 1858, 268.
—— boats of Bengal, A. Henderson on the, 1858, 272.
Rivers of Dukhun, Col. Sykes on the, 1837, 256, 257, 259, 260.
—— in France and Flanders, declivities of, 1834, 443.
——, Dr. R. A. Smith on the supply of water to towns from, 1851, 70.
——, J. F. Bateman on the supply of water to towns from, 1855, 72.
——, canals, and drainage, G. Rennie on the progress of hydraulics in England with reference to, 1834, 473.
——, on the forms of the surface of, 1834, 468.
——, on the progress of our knowledge of, by G. Rennie, 1834, 425.
——, on regurgitations or the swelling of, by obstacles placed in them, 1834, 470.
——, on the phenomena of the stoppage of, R. Mallet on, 1858, 131.
Rivet-iron, W. Fairbairn on the tensile strength of, 1856, 415.
Robiquet's alizarin, 1847, 136.
Rocks, secondary, origin of carbonate of soda in, Dr. Daubeny on, 1836, 24.
——, stratified, H. L. Pattinson on some galvanic experiments to determine the existence or non-existence of electrical currents among, 1839, 23.
—— of North America, on the, 1834, 5.
——, trap, of Dukhun, Col. Sykes on the, 1837, 219, 227, 230.
——, on the metamorphosis of, by Prof. Forchhammer, 1844, 165.
——, report on cleavage and foliation in, and on the theoretical explanations of these phenomena, by Prof. Phillips, 1856, 369:—
1. Cleavage distinct from stratification, 370.

Rocks, *continued.*
2. Cleavage continuous through large ranges of country, 372.
3. Cleavage in continuous parallel planes across bent and contorted strata, 373.
4. Cleavage symmetrically related to axes of movement of the strata, 374.
5. Relation of cleavage planes to the inclination of the strata, 375.
6. Cleavage varies in strata of unlike quality, 383.
7. Cleavage accompanied by change of dimensions in rocks, 386.
8. Secondary cleavage of slate, 393.
9. Relation of cleavage to joints, 393.
10. Occurrence of structures analogous to cleavage near greenstone dykes, 394.
11. The cleat in coal, 395.
—— and minerals, report on the results obtained by the mechanico-chemical examination of, by A. Gages, 1859, 65:—
Introduction.
1. Comparative examination of the residues of Permian magnesian limestones from ten localities, 66.
2. Comparative examination of the magnesian limestone of Howth, co. Dublin, contrasted with those of the Permian localities, 68.
3. Magnesian limestone conglomerate from Downhill, co. Londonderry, 69.
4. Examination and analysis of a pseudo-dolomite, 70.
5. Experiments on the composition and structure of the residues obtained from the calp or middle limestone, co. Dublin, and of the lower limestone shales of Drogheda, 71.
6. On chloritic slate, and metamorphic limestone derived from it, 73.
7. On a metamorphic limestone containing garnets reposing on the granite, 75.
Rodentia of North America, Sir J. Richardson on the, 1836, 150.
——, fossil, British, Prof. Owen on, 1842, 72.
Rosa spinosissima and R. Doniana, Prof. Buckman on the growth of, 1859, 24.
Rubiacate of potash, Dr. E. Schunck on the, 1848, 66.
Rubiacic acid, Dr. E. Schunck on, 1847, 137, 142; 1848, 66.
Rubiacin, Dr. E. Schunck on, 1847, 136, 141; 1848, 66.
Rubian, a colouring matter, Dr. E. Schunck on, 1847, 136, 143; 1848, 68.
Ruminantia of North America, 1836, 159; of Dukhun, 1837, 247.
——, fossil, British, Prof. Owen on the, 1843, 232.
Rysosteus, fossil, British, Prof. Owen on, 1841, 159.
Sabellæ, Dr. T. Williams on the, 1851, 172, 186, 192, 204, 225, 271.
Salamandra, North American, Sir J. Richardson on, 1836, 201.
Saleniadæ, oolitic, Dr. T. Wright on the, 1856, 399, 401.
Saliva, its action on food, 1842, 50.
Salmon, Sir W. Jardine, Dr. Fleming, and E. Ashworth's report on the experiments conducted at Stormontfield, near Perth, for the artificial propagation of, 1856, 451.
Salmonidæ of North America, Sir J. Richardson on the, 1836, 214, 216.
—— of Ireland, 1840, 391; British, 1844, 302.
—— of the Japan Sea, 1845, 304.
Salsafy, vegetable, Prof. Buckman on the growth of, 1857, 212; 1859, 29.
Salt, rock, Melloni's discovery of a singular property possessed by, 1840, 3.
Saltatoria, British, C. Spence Bate on, 1855, 57.
Salt-springs, Dr. Daubeny on the ingredients of, 1836, 16.
—— springs, Dr. Daubeny on the origin of, 1836, 74.
Salts, Prof. Johnston on the, 1831–32, 479.
——, chlorine, Prof. Johnston on, 1831–32, 442.
——, red, of manganese, Prof. Johnston on, 1831–32, 482.
——, sulphur, Prof. Johnston on, 1831–32, 440.
—— of the magnesian family, J. Blake on their action when introduced into the blood, 1843, 117; 1845, 84.
——, neutral, Dr. Daubeny on the nomenclature of the, 1851, 127.
—— of iridium and osmium, J. Blake on their action when introduced into the blood, 1846, 27.
——, preliminary report on the solubility of, at temperatures above 100° Cent., and on the mutual action of salts in solution, by Prof. W. K. Sullivan, 1859, 291:—
Introduction.
Preliminary inquiries on solution, the actions of different solvents, &c., 294.
Relative compressibility of saline solutions, 305.
Capillary ascension and diffusion of saline solutions, 306.
Phenomena connected with density, 307.
Thermology of saline solutions, 307.
Sands, ferruginous, of North America, Prof. H. D. Rogers on the, 1834, 50, 52.
Sandstone, old red, Prof. Agassiz on the fossil fishes of the, 1842, 80.
——, lower new red, with the coal-measures, at Collyhurst, report on the excavation made at the junction of the, by E. W. Binney, 1843, 241.
——, yellow, of Dura Den, on the fossils of the, 1860, 32.

Sanguisorba officinalis, Prof. Buckman on the growth of, 1857, 210.
Sarsiadæ, British, 1860, 233.
Sauria incertæ sedis, fossil, 1841, 156.
Saurian, fossil, gigantic, from the lower greensand at Hythe, Prof. Owen on a, 1841, 157.
Saurians, fossil, Prof. Owen on the, 1839, 43.
Saurii, American, 1836, 200.
——, Irish, W. Thompson on, 1840, 383.
—— of New Jersey, Prof. H. D. Rogers on, 1834, 61.
Sauroideæ (Pisces) of North America, Sir J. Richardson on the, 1836, 215, 217.
—— of the Devonian system, 1843, 195; of the Carboniferous system, 197; of the Permian system, 198; of the Triassic system, 199; of the Oolitic system, 202; of the Cretaceous system, 204.
Sauropterygia, fossil, Prof. Owen on, 1859, 159.
Savings'-banks in the United Kingdom, sketch of the progress of, by G. R. Porter, 1845, 129.
Saxicava rugosa, C. W. Peach on, 1843, 129.
Saxicavidæ of the West coast of North America, P. P. Carpenter on the, 1856, 259.
Scalaria of the Ægean Sea, 1843, 137, 189; Irish, 1843, 256; British, 1850, 202, 224; 1860, 219; South European, 1850, 266; North-east Atlantic, 1856, 123; West coast of North America, 1856, 336.
Scale, report on the measurement of the Aberdeen standard, by F. Baily, 1835, 91.
Scansores of North America, 1836, 177, 194; of Dukhun, 1837, 249; of Ireland, 1840, 371.
Schists, fucoid, metamorphosed, in Scandinavia, Prof. Forchhammer on the, 1844, 155.
Schizzodesma, Dr. Carpenter on the structure of the shell of, 1847, 103.
Schools, Aberdeen industrial feeding, A. Thomson on the, 1859, 44.
Schreibersite, a new mineral, 1849, 33.
Sciænidæ, Irish, W. Thompson on, 1840, 386.
—— of the China and Japan seas, 1845, 223; North American, 1836, 206, 209; Irish, 1840, 386; British, 1844, 302; of New Zealand, 1842, 18.
——, fossil, of the London clay, 1844, 287.
Sciænurus Bowerbankii, fossil, of Sheppey, description and outline restoration of, by Prof. Agassiz, 1844, 295.
Scientific memoirs, foreign, report on the translation and publication of, 1840, 446; 1841, 328; 1842, 210; 1843, 139.
Scincidæ, American, 1836, 200.
Sclavonian races, on the, 1851, 142.
Sclavonic and Semitic languages, Rev. Dr. Donaldson on the, 1851, 146.
Scleroderma of North America, 1836, 220; of the seas of China and Japan, 1845, 200, 317; British, 1844, 303.
Scolopacidæ of North America, Sir J. Richardson on the, 1836, 182; of Dukhun, 1837, 250; of Ireland, 1840, 375; 1852, 291.
Scomberesocidæ of the China seas, Sir J. Richardson on the, 1845, 264.
——, fossil, of the London clay, Prof. Agassiz on, 1844, 292, 308.
Scomberoidæ of North America, Sir J. Richardson on the, 1836, 206, 210.
——, Irish, 1840, 387; British, 1844, 302.
—— of New Zealand, Sir J. Richardson on the, 1842, 20.
—— of the China and Japan seas, Sir J. Richardson on the, 1845, 267.
——, fossil, 1843, 205, 207; of the London clay, Prof. Agassiz on, 1844, 289, 307.
Scopelinidæ of the China seas, Sir J. Richardson on the, 1845, 301.
Scopulæ of spiders, on the, 1844, 62.
Scorzonera, Prof. Buckman on the growth of, 1857, 212; 1859, 29.
Scutibranchiata of the Ægean Sea, Prof. E. Forbes on the, 1843, 133, 134, 188.
—— of Ireland, W. Thompson on the, 1843, 258.
—— of the North-east Atlantic, &c., 1856, 118, 119.
—— of the West coast of North America, 1856, 317.
Scylliidæ of Ireland, 1840, 397; of the China and Japan seas, 1845, 193; of New Zealand, 1842, 29.
Scylliodontidæ of the China and Japan seas, Sir J. Richardson on the, 1845, 195.
Sea-coast of Yorkshire, Dr. J. P. Bell on the character and measurement of degradation of the, 1853, 81.
Sea-water, Dr. Daubeny on, 1836, 3; gases present in, 6.
——, R. Mallet on its action on iron, 1838, 253; 1840, 221; 1843, 1.
——, comparative analytical researches on, by Prof. Forchhammer, 1846, 90.
Sea-waves, great, Prof. Bache's account of the phenomena of, 1858, 124.
Sea-weeds, R. Mallet on the effect of metallic poisons on, 1843, 25.
——, analysis of, 1844, 156.
Seals of North America, Sir J. Richardson on the, 1836, 148.
Secretions, report of the Medical Section on the composition of, and the organs producing them, 1837, 139, 149.
Seeds, R. Hunt on the influence of light on the germination of, 1842, 75; 1844, 29; 1846, 33; 1847, 17.
——, reports on the growth and vitality of, 1841, 50; 1842, 34; 1843, 105; 1844, 94; 1845, 337; 1846, 20; 1847, 145;

1848, 31; 1849, 78; 1850, 160; 1851, 53; 1852, 177; 1853, 67; 1854, 439; 1855, 78; 1857, 43; general summary of the experiments, from 1841 to 1857 inclusive, 1857, 43.
Seismic maps of Berghaus, Johnston, and Mallet, 1858, 41, 45, 60.
—— energy in relation to time, season, and space of earthquakes, R. Mallet on, 1858, 47, 51, 57.
Seismometer, common pendulum, 1841, 46.
——, suspended and inverted pendulum, 1841, 47; 1858, 73, 74, 79, 80; spring pendulum, 73, 74, 80, 81.
——, self-registering, report of committee on the construction of a, 1848, 98; 1850, 88; 1851, 278; 1853, 86; 1858, 74, 81, 87.
Seismometers, report of committee on, by Col. Portlock, 1854, 370.
——, R. Mallet on, 1858, 72.
Seismoscope, description of the, 1851, 278.
Selachiideæ of North America, Sir J. Richardson on the, 1836, 221, 222.
Selenic acid, J. Blake on its action when introduced into the blood, 1846, 29.
Self-registering meteorological instruments employed in the observatory at Senftenberg, 1845, 108.
—— magnetographs of the Kew observatory, 1849, 82, 83, 86; 1850, 178, 181; 1851, xxvii, 325, 328, 329, 330, 351, 358, 360, 362; 1859, 200.
Semitic languages, Rev. Dr. Donaldson on the, 1851, 146.
—— and Sclavonic languages, 1851, 146.
Seneca on earthquakes, 1850, 8.
Sepia, Dr. Carpenter on the structure of the shell of, 1847, 117.
Septaria gigantea, Dr. Carpenter on the shelly tube of, 1847, 106, 132.
Serpulæ, Dr. T. Williams on the, 1851, 168, 174, 177, 192, 203, 225, 229.
Serpulina, Irish, W. Thompson on the, 1843, 272.
Serranidæ of the China and Japan seas, Sir J. Richardson on the, 1845, 229.
Shadows, aërial, Prof. J. D. Forbes on, 1840, 124, 137.
Shales, calp, &c., lower limestone, A. Gages on the chemical examination of, 1859, 71.
Sheep, Prof. Owen on the cranium of a, 1846, 189.
——, J. B. Lawes and Dr. Gilbert on the food of, 1852, 325, 328.
Shells of the Ægean Sea, distribution of, in depth, 1843, 171, 172.
——, freshwater, of North America, 1836, 224.
—— of the West coast of North America, P. P. Carpenter on the, 1856, 159.
——, Acapulco, list of, 1856, 170.
——, list of, common to the European and American coasts of the Atlantic, 1836, 224.
Shells obtained in the Port of Faro in Algarve, 1850, 270.
—— of the Galapagos Islands, 1856, 359.
——, land, at Gibraltar, 1850, 279; at Cintra, 304.
——, list of species obtained in Kingstown and Killiney Bays, 1860, 29.
—— procured at Malaga, &c., 1850, 280.
——, list of, from the Turbot Bank, 1857, 230.
——, list of species taken in deep water off the Maidens Lighthouses, 1857, 234.
——, report on the microscopic structure of, by Dr. W. B. Carpenter, 1844, 1–24:—
I. Introductory remarks.
II. On the condition of the calcareous matter in shell, 3.
III. Of the animal basis of shell, 4.
IV. Prismatic cellular structure, 4.
V. Membranous shell-substance, 9.
VI. Nacreous structure, 11.
VII. Tubular structure, 13.
VIII. Cancellated structure, 14.
IX. Shells of Brachiopoda, 16.
X. Shells of Placunidæ, 18.
XI. Shells of Ostraceæ, 19.
XII. Shells of Pectinidæ, 19.
XIII. Shells of Margaritaceæ, 20.
XIV. Shells of Nayadeæ, 21.
Plates, 22.
——, second report on the microscopic structure of, by Dr. W. B. Carpenter, 1847, 93:—
Introductory remarks.
I. Observations supplemental to former report, 93.
Brachiopoda.
Placunidæ.
Pectinidæ.
Margaritaceæ.
Nayadeæ.
II. Continuation of former report, 97.
III. Mytilaceæ, 99.
IV. Tridacnaceæ, 100.
V. Chamaceæ, 100.
VI. Trigonaceæ, 100.
VII. Arcaceæ, 101.
VIII. Cardiaceæ, 102.
IX. Conchaceæ, 102.
X. Nymphaceæ, 102.
XI. Mactraceæ, 103.
XII. Myaceæ, 103.
XIII. Solenaceæ, 105.
XIV. Tubicolæ, 106.
XV. Gasteropoda, 107.
XVI. Cephalopoda, 116.
XVII. Echinodermata, 117.
XVIII. Crustacea, 127.
List of illustrations, 130.
Shipping statistics, as data conducive to the improvement of naval architecture, report on, 1858, 239.
——, report of the committee on the measurement of, for tonnage, 1856, 458; 1857, 62.

Ships, tonnage registration of, C. Atherton on, 1856, 423; 1857, 112.
——, C. Atherton on mercantile transport economy, 1856, 423; 1857, 112.
——, report on the forms of, 1840, 425; 1841, 325; 1842, 104; 1843, 112; 1844, 391.
——, iron, on the corrosion of, 1838, 253; 1840, 221; 1843, 14.
——, wooden and iron, on the deviations of the compass in, by A. Smith, 1854, 434.
——, iron-cased, remarks on, by Admiral Moorsom, 1860, 174.
——, *vide* Boats and Steam-ships.
Shooting stars. *Vide*, Meteors.
Shrews of North America, 1836, 140; of Ireland, 1840, 359.
Siganoideæ of New Zealand, Sir J. Richardson on, 1842, 22.
Sigaretidæ, Irish, W. Thompson on the, 1843, 258.
Silica, Prof. Johnston on, 1831–32, 423.
——, Dr. Daubeny on its origin in springs, 1836, 25.
Siliquariadæ of the Ægean Sea, Prof. E. Forbes on the, 1843, 137, 188.
Sillaginidæ of the China and Japan seas, Sir J. Richardson on the, 1845, 223.
Silurian system, Prof. Agassiz on the British fossil fishes of the, 1843, 194.
Silurians, upper, of Lesmahago, Lanarkshire, report on the, 1859, 63.
Siluridæ of the China and Japan seas, Sir J. Richardson on the, 1845, 281.
—— of North America, Sir J. Richardson on the, 1836, 214, 216.
Silver's marine and stationary engine-governors, 1859, 123.
Siphonocetus, C. Spence Bate on, 1855, 31, 59.
Siphonostomata, British, 1860, 225.
——, Irish, W. Thompson on the, 1843, 270.
Sipunculidæ of the Ægean Sea, Prof. E. Forbes on the, 1843, 149, 151.
——, Dr. Carpenter on the structure of the shell of the, 1847, 127.
——, British, 1860, 228.
——, Irish, W. Thompson on, 1843, 280; 1852, 295.
Skeleton, vertebrate, Prof. Owen on the archetype and homologies of the, 1846, 169.
Skull, human, Blumenbach's principal varieties of form of the, 1831–32, 535; 1847, 233.
——, human, Prof. Owen on the, 1846, 188, 300.
—— of the human embryo (fifth month), Prof. Owen on the, 1846, 197.
—— of birds, Prof. Owen on the, 1846, 189, 293.
—— of reptiles, Prof. Owen on the, 1846, 190, 283.
Skull of fishes, Prof. Owen on the, 1846, 178, 274.
—— of mammals, Prof. Owen on the, 1846, 189, 297.
—— of vertebrata, synonyms of the bones of, by Prof. Owen, 1846, 338.
Skull-bones, Prof. Owen on the classification of, 1846, 307.
Skulls, human, Dr. Prichard on the classification of, 1831–32, 534; 1847, 233.
——, Nepalese, report on a series of, by Prof. Owen, 1859, 95.
Sky and clouds, Prof. J. D. Forbes on the colour of the, 1840, 120.
Sky-light, Prof. J. D. Forbes on the polarization of, 1840, 124.
Slags, crystalline, report on the, by Dr. J. Percy, 1846, 351:—
1. The crystallographic and mineralogical description, by Prof. Miller.
2. The analysis.
3. Special remarks.
—— of furnaces, on the, 1831–32, 347.
Slate, Prof. Phillips on the secondary cleavage of, 1856, 393.
——, aluminous, of Scandinavia, Prof. Forchhammer on the metamorphosis of the, 1844, 155.
——, chloritic, and supposed metamorphic limestone derived from it, A. Gages on the chemical examination of, 1859, 73.
Slickensides in gritstone, S. Eddy on, 1858, 171.
Smeaton's water-pressure engine, 1848, 14.
Smelting of iron, report on the gases evolved from iron-furnaces, with reference to the theory of the, by Prof. Bunsen and Dr. Lyon Playfair, 1845, 142.
Smith's (Dr. W.) discoveries in Secondary Geology, notice of, 1832, 370.
Smoke, report on the consumption of fuel and the prevention of, by W. Fairbairn, 1843, 294; 1844, 100, 118.
Snow-water, Dr. Daubeny on, 1836, 2.
Soda and potash, Prof. Johnston on the relation of the forms of, 1831–32, 427.
——, carbonate of, in mineral waters, Dr. Daubeny on, 1836, 20.
——, carbonate of, in certain secondary rocks, Dr. Daubeny on, 1836, 24.
—— without carbonic acid in springs, 1836, 25.
——, iodate of, on preparing, 1831–32, 480.
——, sulphate of, and chloride of barium, Dr. T. Andrews on the heat of combination of, 1849, 72.
——, sulphate of, and acetate of lead, Dr. T. Andrews on the heat of combination of, 1849, 73.
——, sulphate of, and nitrate of barytes, Dr. T. Andrews on the heat of combination of, 1849, 73.
—— and lime, carbonate of, Prof. Johnston on, 1831–32, 480.

Solar heat, Prof. J. D. Forbes on, 1831–32, 221; 1840, 68.
—— heat, origin of the, Prof. W. Thomson's theory of, 1854, 352.
—— radiation, Prof. J. D. Forbes on, 1831–32, 222; 1840, 60.
—— radiations, R. Hunt on the state of our knowledge of the chemical action of the, 1850, 137; list of bodies susceptible of chemical change under the influence of the, 150; list of memoirs, &c., embracing influences of light on organic bodies, 153.
—— radiations, on the chemical action of the, by R. Hunt, 1852, 262; 1853, 68.
—— radiations, reports on the influence of, on the vital powers of plants, by Dr. J. H. Gladstone, 1852, 239; 1854, 373; 1855, 15.
—— rays, Rev. Prof. Powell on the heat of the, 1831–32, 283.
—— rays, R. Hunt on their influence on the germination of seeds and the growth of plants, 1842, 75; 1844, 29; 1846, 33; 1847, 17.
—— rays, report on the actinograph for registering the chemical action of the, by R. Hunt, 1845, 90; 1846, 31.
—— spectrum, Rev. Prof. Powell on the state of our knowledge of the refractive indices for the standard rays of the, 1836, 288; 1839, 1.
—— spectrum, Rev. Prof. Powell on the action of gaseous and other media on the, 1841, 329; 1843, 293.
—— system, W. Hopkins on the hypothesis of the former nebulosity of the, 1847, 56.
—— theory, G. B. Airy on the, 1831–32, 174.
Solasteridæ, oolitic, 1856, 402.
Solecurtus, Dr. Carpenter on the structure of the shell of, 1847, 105, 132.
Solemya australis, Dr. Carpenter on the structure of the shell of, 1847, 106, 132.
Solenaceæ, Dr. Carpenter on the microscopic structure of the shells of, 1847, 105, 132.
Solenidæ of the West coast of North America, P. P. Carpenter on the, 1856, 301.
—— of Strangford Lough, 1857, 105, 106, 108, 109.
Sorex, fossil, British, Prof. Owen on the, 1842, 57.
Sorghum saccharatum (Chinese sugar-cane), Prof. Buckman on the growth of, 1859, 30; 1860, 35.
Soricidæ of North America, 1836, 140; Irish, 1840, 359.
Sound, on the theory of, 1836, 233; 1846, 14.
——, on the production of, by the motion of water through tubes, 1837, 156.
Sound, Prof. Stokes on the theory of, 1846, 14.
Sparidæ of the seas of China and Japan, Sir J. Richardson on the, 1845, 240.
——, North American, Sir J. Richardson on, 1836, 206, 209.
—— of New Zealand, Sir J. Richardson on, 1842, 20.
——, Irish, 1840, 386; 1852, 291; British, 1844, 302.
——, fossil, of the London clay, Prof. Agassiz on the, 1844, 287, 307.
Spatangidæ, British, 1860, 230.
Spectrum, solar, report on the state of our knowledge of the refractive indices for the standard rays of the, by the Rev. Prof. Powell, 1836, 288; 1839, 1.
——, solar, Sir D. Brewster on the action of gaseous and other media on the, 1841, 329; 1843, 293.
—— analysis, R. Hunt on, 1852, 262; 1853, 68.
Specula of telescopes, on the, 1844, 79.
Sphagebranchidæ of the seas of China and Japan, Sir J. Richardson on the, 1845, 314.
Sphyrænoidæ, fossil, of the London clay, Prof. Agassiz on the, 1844, 290, 308.
—— of the China and Japan seas, Sir J. Richardson on the, 1845, 266.
Spiders, J. Blackwall on the structure, functions, and economy of, 1844, 62.
——, R. H. Meade on the anatomy of, and structure of the spinning-organs of, 1858, 157.
——, *vide* Araneidea.
Spinal marrow, Dr. W. C. Henry on the, 1833, 74.
Spinning-organs of spiders, on the, 1844, 62; 1858, 157.
Spio, Dr. T. Williams on the genus, 1851, 170, 191, 199, 213, 234.
Spirula, Dr. Carpenter on the structure of the shell of, 1847, 117.
Spondylidæ of the West coast of North America, P. P. Carpenter on the, 1856, 312.
——, Dr. Carpenter on the structure of the shells of, 1844, 19.
Sponges of the Ægean Sea, Prof. E. Forbes on the, 1843, 152.
—— of Ireland, W. Thompson on the, 1843, 286; 1852, 296; 1857, 112.
——, British, list of, compiled by R. M'Andrew, 1860, 235.
Spongiadæ, Dr. J. S. Bowerbank on the vital powers of the, 1856, 438:—
Inhalation and exhalation, 438.
Adhesion of species, 446.
Reparative powers, 447.
Disease and death, 449.
Nutrition, 449.
——, further report on the, by J. S. Bowerbank, 1857, 121.
Spongilla fluviatilis, Dr. J. S. Bowerbank on the, 1857, 121.

Sporadic diseases, on, 1834, 70.
Springs, water of, Dr. Daubeny on their temperature, chemical constitution, and effects on the animal economy, 1836, 7.
——, Dr. Daubeny on the influence of earthquakes upon, 1836, 43.
——, Dr. Daubeny on the origin of, 1836, 58.
——, salt, Dr. Daubeny on the origin of, 1836, 74.
——, mineral, Dr. Daubeny on their action upon the animal economy, 1836, 44.
——, mineral, Dr. Daubeny on the products of, 1836, 56.
——, thermal, Dr. Daubeny on the origin of, 1836, 59; geological position of, 62; theories of, 67; oxygen in, 42, 79.
——, thermal, catalogue of, 1836, 80–95.
——, hot, hints for observations of the temperature of, by Prof. J. D. Forbes, 1840, 152.
——, on the supply of water from, to towns, by J. F. Bateman, 1855, 62.
Squalidæ of the Devonian system, 1843, 197; of the Oolitic system, 201; of the Cretaceous system, 204; of the Tertiary system, 206; of the London clay, 1844, 308.
—— of New Zealand, 1842, 29; of the seas of China and Japan, 1845, 193; Irish, 1840, 397; 1852, 292.
Squirrels, North American, Sir J. Richardson on the, 1836, 151.
Standard scale, Aberdeen, F. Baily's report on the comparative measurement of the, 1835, 91.
Starch and sugar in food, J. B. Lawes and Dr. Gilbert on the equivalency of, 1854, 421.
Stars, periodical publications relating to the, a short account of, by G. B. Airy, 1831–32, 126.
——, catalogues of, statement of the improvements in, 1831–32, 135; an account of the more extended Star Catalogues, 143.
——, double, notices upon the measures of, 1831–32, 146.
——, British Association Catalogue of (extension of the Royal Astronomical Society's Catalogue), reports on, 1838, 316; 1839, 174; 1840, 425; 1841, 330; 1842, 206; 1845, 340.
——, Lacaille's, in the *Cœlum Australe Stelliferum*, reports on the reduction of, 1839, 171; 1840, 427; 1841, 327; 1842, 205; 1845, 339; 1847, 379.
——, Lalande's, in the *Histoire Céleste*, reports on the reduction of the, 1838, 316; 1839, 174; 1840, 426; 1841, 330; 1842, 205; 1845, 339; 1847, 379.
——, reports of committee for revising the nomenclature of the, 1839, 172; 1840, 426; 1841, 44; 1843, 292; 1844, 32.
——, nebulæ observed in the six-feet reflector, by the Earl of Rosse, 1849, 53.
——, falling. *Vide* Meteors.
Statistics, vital, of Edinburgh and Leith, Glasgow, Aberdeen, Perth, and Dundee, 1842, 121–204.
—— of the Four Collectorates of Dukhun (Deccan), by Col. Sykes, 1837, 217.
Steam, on the influence of temperature and powers of different metals in the generation of, 1831–32, 454.
Steam-engine boiler, on the changes which take place in heating a, 1844, 106.
Steam-engines, report on a constant indicator for, by the Rev. Prof. Moseley, Prof. Hodgkinson, and J. Enys, 1841, 307:—
Preliminary remarks.
Watt's indicator, 308.
Morin's compteur, 308.
Prof. Moseley's indicator, 310.
Theory of the indicator, 314.
The springs, 317.
Friction of the pistons, integrating wheel, &c., 320.
Formulæ for determining the work of an engine by means of the indicator, 323.
Second report, 1842, 98.
Results of a trial of the constant indicator, 99.
Comparison of the results given by the indicator with the experiments of Mr. Wicksteed, 102.
Variations in the registration, 102.
——, Silver's marine and stationary engine governors, 1859, 123.
——, report of the committee for experiments on, 1843, 104; 1844, 90.
——, velocity-measuring machine for, 1844, 90.
Steam navigation in Hull, J. Oldham on the rise, progress, and position of, 1853, 45–52; 1857, 57; 1859, 119.
Steam-ship performance, report of the committee on, 1858, 239; 1859, 268; 1860, 193.
—— transport economy, C. Atherton on, 1856, 423; 1857, 112; 1859, 124.
Steam-ships, A. Henderson on, in reference to shallow-water navigation in India, 1858, 268.
——, on the performance of, the functions of the screw, and the relations of its dizmeter and pitch to the form of the vessel, by Admiral Moorsom, 1860, 172.
——, report of committee on their measurement for tonnage, 1856, 458; 1857, 62.
——, statistics as data for the improvement of, report of committee on, 1858, 239.
——, *vide* Shipping and Ships.
Stearoptes, list of, 1831–32, 516.
Steel, action of air and water on, 1840, 221; 1843, 1.
——, cast, exposed in simple contact with zinc, immersed in fresh water, R. Mallet on, 1840, 251; in sea water, 251.

Steneosaurus, fossil, Prof. Owen on, 1841, 82.
Stomapoda, Irish, 1843, 268; 1858, 263.
——, British, list of, 1860, 223.
Stones and other materials, Prof. Hodgkinson on the strength of, 1842, 211.
Storm clock of the Kew observatory, 1844, 142; description of the, 1850, 178.
—— papers of the Kew observatory, specimen of, 1844, 134.
Storms, Prof. J. D. Forbes on the phenomena of, 1831–32, 248; 1840, 109.
——, revolving, Sir J. F. W. Herschel on, 1843, 100.
——, revolving, and explosions in coal-mines, report on the relation between, by T. Dobson, 1855, 1.
Strata, Prof. J. D. Forbes on the temperature and conducting power of different, 1840, 434.
——, report on recording the sections of, in railway excavations, 1841, 331; 1842, 38; 1843, 295.
——, folded, W. Hopkins on, 1847, 67.
Stratification of rocks, cleavage distinct from, Prof. Phillips on, 1856, 370.
Stratified beds at a fault, W. Hopkins on the relative displacement of, 1847, 62.
Strength of materials, P. Barlow's report on the, 1833, 93:—
Formulæ relating to cases of transverse strain, 100.
Formulæ relating to the deflection of beams in cases of transverse strain, 101.
Table of the mean strength and elasticity of various materials, 103.
—— of cast iron, on the, 1837, 337, 377; 1838, 312; 1842, 88.
—— of wrought iron at various temperatures, W. Fairbairn on the, 1856, 405; of rivet iron, 415.
—— of stones, &c., Prof. Hodgkinson on the, 1842, 211.
Streptospondylus, fossil, British, Prof. Owen on, 1841, 88.
Strigidæ of North America, 1836, 168; of Dukhun, 1837, 248; of Ireland, 1840, 365.
Strontian and barytes, separation of, 1831–32, 475.
—— in mineral waters, Dr. Daubeny on, 1836, 15.
Struthionidæ, Irish, 1840, 373.
Sturionidæ of North America, 1836, 221; of Ireland, 1840, 397; 1852, 292; of the China seas, 1845, 198.
Sturnidæ of North America, 1836, 176; of Ireland, 1840, 370.
Submuriate of iron, 1832, 483.
Subterranean forces, W. Hopkins on their effects on the solid crust of the earth, 1847, 57, 74.
—— temperature, report of experiments on, by Prof. Phillips, 1836, 291.
—— temperature in Ireland, report of committee on, by T. Oldham, 1844, 221.
Subterranean temperature of deep mines, 1837, 134; 1840, 309; 1857, 96.
Suchosaurus cultridens, fossil, British, Prof. Owen on, 1841, 67.
Sugar and starch in food, J. B. Lawes and Dr. Gilbert on the equivalency of, 1854, 421.
Sulphate of copper in grain, &c., Prof. Johnston on, 1831–32, 482.
Sulphur salts, Prof. Johnston on, 1831–32, 440.
—— in mineral waters, Prof. Johnston on, 1831–32, 460.
Sulphuret of phosphorus and chlorine, Prof. Johnston on, 1831–32, 463.
Sulphuretted hydrogen, Prof. Johnston on its action on nitric acid, 1831–32, 460.
Sulphuric acid, anhydrous, mode of preparing, 1831–32, 462.
—— acid, chlorohydrated, 1859, 5.
—— acid, Dr. J. Blake on its action when introduced into the veins, 1846, 30.
—— acid, Prof. Langberg on the specific gravity of, at different degrees of dilution, 1847, 1.
—— acid and chloride of barium, or nitrate of barytes, or acetate of barytes, or acetate of lead, or nitrate of lead, heat of combinations of, Dr. T. Andrews on the, 1849, 74.
—— acid with water, heat of combination of, Dr. T. Andrews on the, 1849, 67.
Sulphurous acid gas, method of preparing, 1831–32, 461.
Sun, suggestions for the observation of the total eclipse of the, 1850, 359.
—— and moon, the old planets and their satellites, account of the principal observations, tables, &c. of the, by G. B. Airy, 1831–32, 149.
——, blue, Prof. J. D. Forbes on the phenomena of a, 1840, 123.
——, on the coloured rings of the, 1840, 135.
Sun's disc, photographic register of the spots on the, 1854, xxxiv.
—— rays, Rev. Prof. Powell on the heat of the, 1831–32, 283.
Sungai language, 1847, 186.
Sunset tints, secondary, Prof. J. D. Forbes on, 1840, 123.
Survey, Ordnance, of Scotland, 1851, 370.
Surveys, magnetic, 1838, 49; 1841, 40; 1842, 4; 1843, 59; 1844, 147; 1845, 3; 1857, 130; 1859, xxxvii, 167.
Sus, fossil, British, Prof. Owen on the, 1843, 228.
Suspension bridges, C. Vignoles on the adaptation of, to sustain the passage of railway trains, 1857, 154; 1858, 293.
——, P. W. Barlow on the mechanical effect of combining girders and suspension chains, &c., 1857, 238.
Syllidæ, Dr. T. Williams on the, 1851, 190, 198, 212, 213, 233.
——, British, 1860, 228.

Sylviadæ, North American, 1836, 171; of Dukhun, 1837, 249; of Ireland, 1840, 367.
Symphytum asperrimum and S. officinale, Prof. Buckman on the growth of, 1857, 210.
Sympiesometer, 1831–32, 227.
Synaptidæ, British, 1860, 230.
Syngnathidæ, Irish, W. Thompson on the, 1840, 396; 1852, 292.
—— of North America, 1836, 220; of New Zealand, 1840, 28; British, 1844, 303.
—— of the China seas, Sir J. Richardson on the, 1845, 202.
Syro-Arabian languages, 1847, 247.

Tæniadæ, British, 1860, 229.
Tænioidei, British, 1840, 388; 1844, 302.
Takue (or Boje) and Barea language, 1847, 208.
Talitrus, C. Spence Bate on, 1855, 26–57.
Talpa, fossil, British, Prof. Owen on the, 1842, 57, 74.
Tamus communis (Black Bryony), Prof. Buckman on, 1859, 29.
Tantalidæ of North America, 1836, 182; of Dukhun, 1837, 250.
Tartaric and paratartaric acids, Prof. Johnston on, 1831–32, 500.
Tectibranchiata of the Ægean Sea, Prof. E. Forbes on the, 1843, 133, 134, 187.
—— of Ireland, W. Thompson on the, 1843, 251; 1852, 292.
—— of the West coast of North America, P. P. Carpenter on the, 1856, 313.
Teidæ, American, 1836, 200.
Telegraph thermometer, Prof. Wheatstone on the, 1843, 128.
——, tribothermic, P. Erman on a, 1845, 107.
Teleosaurus, fossil, British, Prof. Owen on, 1841, 72:—T. Chapmanni, T. Cadomensis, T. æsthenodeirus.
Telescope, achromatic, 1831–32, 135; invention of, 312.
——, aplanatic, 1831–32, 312.
—— and equatorial mountings, report on the improvement of, by T. Grubb, 1857, 195.
——, large reflecting, the Earl of Rosse on, 1844, 79.
Tellina, Dr. Carpenter on the structure of the shell of, 1847, 103, 131.
Tellinidæ of the West coast of North America, P. P. Carpenter on the, 1856, 301.
—— of Strangford Lough, 1857, 105–109.
Telluric acid, Prof. Johnston on, 1831–32, 473.
Tellurium, on the properties and combinations of, 1831–32, 471.
——, metallic, Prof. Johnston on, 1831–32, 472.
——, persulphuret of, Prof. Johnston on, 1831–32, 474.
Tellurium, chlorides of, Prof. Johnston on, 1831–32, 474.
Tellurous acid, Prof. Johnston on, 1831–32, 472.
Temperature, Prof. J. D. Forbes on the progress of our knowledge of, 1831–32, 208; 1840, 42.
——, Prof. J. D. Forbes on the decrease of, with height, 1831–32, 218; 1840, 57.
—— of the globe and of space, 1831–32, 221; 1840, 66.
——, Rev. Prof. Challis on the law of variation of, at different heights, 1836, 229.
——, J. P. Harrison on lunar influence on, 1857, 248; 1859, 193.
—— and conducting power of different strata, Prof. Forbes on the, 1840, 434.
—— of the Arctic regions, 1831–32, 216.
——, daily, in Bengal, on the, 1852, 252–261.
—— of Dukhun, Col. Sykes on the, 1837, 232.
——, observations for, at Birmingham, by W. Wills, 1852, 297.
——, observations on, at Bombay, by General Sabine, 1845, 73.
—— observations at Point Barrow, J. Simpson on the, 1857, 159.
——, reports on the hourly observations of the thermometer, 1835, 181; 1838, 21; 1839, 149; 1841, 328; 1842, 30; 1843, 291.
—— of hot springs, hints for observations of, 1840, 152.
—— of deep mines, R. W. Fox on the, 1837, 134; 1840, 309; 1857, 96.
——, subterranean, report of experiments on, by Prof. Phillips, 1836, 291.
——, subterranean, in Ireland, report of committee on the, by T. Oldham, 1844, 221.
—— tables, by Prof. W. H. Dove, with introductory remarks by General Edward Sabine, 1847, 373; supplement, 1848, 84.
——, Prof. H. W. Dove's remarks on his maps of the isothermal lines of the globe, and on the principal conclusions in regard to climatology deducible from them, 1848, 85.
Tenuirostres of North America, Sir J. Richardson on the, 1836, 178, 194.
Terebellæ, Dr. T. Williams on the, 1851, 170–184, 193, 205, 226, 252, 271.
——, British, 1860, 228.
——, Dr. Carpenter on the microscopic structure of the shells of, 1844, 16; 1847, 93, 130.
Tertiary formations of North America, Prof. H. D. Rogers on the, 1834, 29, 49; older tertiary, or eocene, 43.
—— system, Prof. Agassiz on the British fossil fishes of the, 1843, 206.
Testacea of Dukhun, 1837, 252.
—— of the Ægean Sea, Prof. E. Forbes on the, 1843, 156.

Testacea of the West coast of North America, 1856, 298.
——, British, enumeration of the depths, &c. at which they were taken on the southern and western coasts of England, and northern and western coasts of Scotland, by Prof. E. Forbes, 1850, 200, 220, 248.
——, British, list of, 1860, 218.
—— of the North-east Atlantic, &c., 1856, 101.
——, *vide* Dredging.
——, habits of the, C. W. Peach on the, 1843, 129.
——, effect of metallic poisons on, 1843, 25.
——, fossil, of North America, Prof. H. D. Rogers on the, 1834, 61.
Testudinata, Irish, W. Thompson on the, 1840, 383.
Testudinidæ, North American, 1836, 199.
——, fossil, British, Prof. Owen on, 1841, 160.
Tetraonidæ of North America, 1836, 180; of Ireland, 1840, 373; 1852, 291.
Tetrodontidæ of the China and Japan seas, Sir J. Richardson on the, 1845, 199, 317, 318.
Teuthiæ of the London clay, Prof. Agassiz on the, 1844, 288, 307.
Thames-water, Dr. R. A. Smith on, 1848, 25.
Thecodontia, fossil, Prof. Owen on the, 1859, 163.
Thecodontosaurus, fossil, British, Prof. Owen on, 1841, 153; T. antiquus, 190.
Thelphusa cunicularis of Dukhun, Col. Sykes on, 1837, 252.
Theraponinæ of the China and Japan seas, Sir J. Richardson on the, 1845, 235.
Thermal springs of Dukhun, 1857, 230.
—— waters, report on the state of our knowledge respecting, by Dr. Daubeny, 1836, 1; catalogue of, 80.
Thermo-chemistry, state of knowledge on the subject of, by Dr. T. Andrews, 1849, 63.
Thermo-electricity, Rev. Prof. Cumming's report on, 1831–32, 301.
——, Paul Erman on the influence of friction upon, 1845, 102.
Thermometer, ætherial, 1835, 163.
—— for balloons, 1841, 59; 1843, 128.
——, Sir W. S. Harris's report on the hourly observations of the, at Plymouth, 1835, 181.
—— sunk into trap rock, loose sand, and sandstone, results of observations upon, by Prof. J. D. Forbes, 1840, 434.
Thermometers, Prof. J. D. Forbes on, 1831–32, 208; 1840, 46.
—— of the Kew observatory, 1844, 127; 1851, xxviii, 341, 364; 1852, xxviii; 1854, xxvii, xxxii; 1855, xxx; 1856, xxxi.
Thermometrical observations at Point Barrow, by J. Simpson, 1857, 159.
Thermo-multiplier, Nobili and Melloni's, 1831–32, 265; 1835, 167.
Thermostat, or heat governor, for regulating temperature, Dr. A. Ure on the, 1833, 419.
Thistles, experiments on the growth of, 1857, 214; 1859, 26; 1860, 39.
Thorium, Prof. Johnston on, 1831–32, 476.
Thracia of the Ægean Sea, Prof. E. Forbes on the, 1843, 143, 191.
——, Dr. Carpenter on the structure of the shell in the, 1844, 10; 1847, 103, 104, 131.
Tibboo language, on the, 1847, 215.
Tidal wave, on the, 1837, 417.
—— wave of the Frith of Forth, on the, 1840, 442.
Tide calculations, report on, 1839, 13.
Tide-gauge curves, observations of the 'displacement of summit' of the, 1840, 439.
Tides, Sir J. W. Lubbock's report on the, 1831–32, 189.
——, self-registering machine to give the time and height of high water, 1831–32, 193.
—— of the River Thames, G. and J. Rennie on the, 1834, 486–512.
——, discussions of observations of the, 1836, 285; 1837, 103; 1838, 19; 1839, 13; 1840, 436–441; 1841, 30, 33.
—— at Bristol, on the, 1841, 30.
—— of the Frith of Forth and the east coast of Scotland, report on the, by J. S. Russell, 1843, 110.
——, river and ocean, Prof. G. Stokes on the theory of, 1846, 9.
——, report on an expedition for the purpose of completing our knowledge of the, 1847, 134.
Timber, table of the mean strength and elasticity of, 1833, 103.
Timber-trees of Dukhun, 1837, 245; of India, 1851, 97.
Tonnage of ships, on, 1856, 458; 1857, 62, 112; 1858, 244.
——, tabular comparison of the old, the present, and proposed measurement for, 1857, 87.
Tornatella of the Ægean Sea, 1843, 140, 191; Irish, 1843, 259; South European, 1850, 270 *et seq.*; British, 1850, 204; 1860, 219.
Torpedinidæ of the China and Japan seas, Sir J. Richardson on the, 1845, 196.
Tortoise, large Emydian, from the Kimmeridge clay, 1841, 168.
Tortoises, new red sandstone, 1841, 160.
——, oolite, 1841, 160.
Towns in Scotland, report of committee on the vital statistics of, 1842, 121.
——, on the supply of water to, by J. F. Bateman, 1855, 62.
——, on the air and water of, by Dr. A. J. Smith, 1848, 16; 1851, 66.

Transcendentals, algebraical, R. L. Ellis on, 1846, 34.
Transformations of a series of factorial exponentials, G. Plaar on certain, 1857, 101.
Transit and zenith distances, on instruments for measuring, 1832, 133.
Translation and publication of foreign scientific memoirs, reports on, 1840, 446; 1841, 328; 1842, 210; 1843, 129.
Trap rocks of Dukhun, Col. Sykes on the structure and mineral composition of, 1837, 219, 227, 230.
Travagini (F.) on earthquakes, 1850, 12.
Trees of India, 1837, 245, 255; 1851, 97.
——, on their effect on the climate and productiveness of a country, 1851, 100.
Trematoda, British, 1860, 229.
——, Irish, 1843, 277.
Tretosternon punctatum, Prof. Owen on, 1841, 165.
Trevithick's water-pressure engine, 1848, 14.
Triassic system, Prof. Agassiz on the British fossil fishes of the, 1843, 199.
Tridacnaceæ, Dr. Carpenter on the microscopic structure of the shells of, 1847, 100.
Trifolium pratense and T. medium, Prof. Buckman on the growth of, 1857, 209.
Triglidæ of the China and Japan seas, Sir J. Richardson on the, 1845, 213, 320.
Trigonaceæ, Dr. Carpenter on the microscopic structure of the shells of, 1847, 100.
Trigonella fœnum-græcum, Prof. Buckman on the growth of, 1859, 28.
Trigonometry, Rev. Dr. Peacock on the progress of the science of, 1833, 288.
—— of the parabola, Rev. Dr. Booth on the, 1856, 68.
Trimorphous bodies, Prof. Johnston on, 1837, 197.
Trionychidæ of North America, 1836, 200.
Trionyx, fossil, British, Prof. Owen on, 1841, 168.
Tritoniadæ, J. Alder and A. Hancock on the British species of, 1844, 25, 26.
—— of the Ægean Sea, 1843, 133; Irish, 1843, 250; West coast of North America, 1856, 312; British, 1850, 241; 1860, 220.
Trochidæ of the Ægean Sea, Prof. E. Forbes on the, 1843, 138, 189.
——, Irish, W. Thompson on the, 1843, 256.
Trochilidæ of North America, Sir J. Richardson on the, 1836, 178, 194.
Trochus, Dr. Carpenter on the structure of the shell of, 1847, 116.
Trogonidæ of America, Sir J. Richardson on the, 1836, 180.
Tropical forests, report on the probable effects of the destruction of, 1851, 78.
Troughton's mural circle, 1831–32, 132.
Trygonidæ [Trygonisidæ] of the China and Japan seas, Sir J. Richardson on the, 1845, 197, 317.
Tubes, cylindrical, W. Fairbairn on the resistance of, to collapse, 1857, 215.
Tubicolæ, Irish, 1843, 263; British, 1850, 205; 1860, 221, 222; North-east Atlantic, &c., 1856, 102.
——, Dr. Carpenter on the microscopic structure of the shells of, 1847, 106.
Tubuliporidæ, British, 1860, 231.
Tumali languages, 1847, 198.
Tunicata, Rev. L. Jenyns on the, 1834, 224.
—— of the Ægean Sea, Prof. E. Forbes on the, 1843, 146.
—— of Ireland, W. Thompson on the, 1843, 264; 1852, 292.
—— of Strangford Lough, 1857, 105, 111.
——, British, list of, compiled by R. M'Andrew, 1860, 222.
——, list of, for local museums, 1855, 117.
Turbine or horizontal water-wheel of France and Germany, J. Glynn on the, 1847, 147.
——, Prof. J. Thomson on the, 1852, 317.
Turbinidæ, Ægean, 1843, 136; of Ireland, W. Thompson on the, 1843, 254; 1852, 292.
Turbo, Dr. Carpenter on the structure of the shell of, 1847, 116, 133.
Turnips, experiments on the growth of, 1859, 34, 38.
Turnip-seed adulterated with Indian rape-seed, 1859, 27.
Turpentine, oil of, analysed, 1831–32, 512.
Turritella of the Ægean Sea, 1843, 137, 189; Irish, 1843, 255; British, 1850, 201, 224; 1860, 219; South European, 1850, 266; North-east Atlantic, 1856, 124; West coast of North America, 1856, 325.
Typhidæ, C. Spence Bate on the, 1855, 59.
Typical objects in natural history, report on, 1855, 108; 1856, 461.

Ugro-Tartarian languages, 1847, 244.
Ultramarine, artificial, Prof. Johnston on, 1831–32, 474.
Undulatory theory of light, 1831–32, 310, 317; 1834, 295.
Unguiculata, fossil, British, Prof. Owen on the, 1842, 54.
Ungulata, fossil, British, Prof. Owen on the, 1843, 208.
Unio, Dr. Carpenter on the microscopic structure of the shells of, 1844, 21; 1847, 96, 130.
Unionidæ, Irish, 1843, 261; of the West coast of North America, 1856, 248, 309.
Uralite of Arendal in Norway, Prof. Forchhammer on, 1844, 165.
Uranoscopidæ of the China and Japan seas, Sir J. Richardson on the, 1845, 211.
Urasteridæ, oolitic, 1856, 402.
Urea, artificial formation of, 1831–32, 524; cyanurate of, 524.
Uric acid, analysis of, 1831–32, 524.

Ursidæ, fossil, British, Prof. Owen on, 1842, 62.
—— of North America, 1836, 142; Irish, 1840, 359.
Urus priscus (fossil Aurochs), British, Prof. Owen on the, 1843, 232.

Vanadiate of lead, Prof. Johnston on, 1831–32, 470.
Vanadic acid, Prof. Johnston on, 1831–32, 469.
Vanadium, Prof. Johnston on, 1831–32, 468.
Vane, wind-, Kew observatory, 1844, 129.
Vapour in the atmosphere, on the distribution of, 1840, 101.
Vapours and gases, on the density of, 1831–32, 421.
Varnishes and paints for iron, on, 1838, 287; 1840, 238; 1843, 19, 23.
Vegetable acids, Prof. Johnston on, 1831–32, 500; list of, 506.
—— alkalies, Prof. Johnston on, 1831–32, 499, 508; list of, 510.
—— alkalies, Dr. Daubeny on the nomenclature of the, 1851, 127.
—— anatomy, Prof. Lindley on, 1833, 27.
—— chemistry, Prof. Johnston on, 1831–32, 496.
—— fertilization, Prof. Lindley on, 1833, 45.
—— juices, remarkable action of the spectrum on, 1850, 149.
—— kingdom, typical epitome of, for local museums, 1855, 123, 124.
—— physiology, Prof. Lindley on, 1833, 49.
—— physiology, Prof. Henfrey on the reproduction of the higher cryptogamous plants, 1851, 102.
—— principles, are they educts or products, 1831–32, 499; indifferent, list of, by Prof. Johnston, 514.
—— products imported into Liverpool, Prof. T. C. Archer's report on the, 1857, 254.
—— products imported into the Clyde, M. Connal and W. Keddie's report on the, 1858, 185.
—— substances, indifferent, on, 1831–32, 511.
—— substances, report of the committee on the preservation of, by Rev. Prof. Henslow, 1840, 421; 1842, 40.
—— wax, analysis of, 1831–32, 512.
Vegetables and fruits of Dukhun, Col. Sykes on the, 1837, 239, 242.
——, esculent, experiments on the growth of, by Prof. Buckman, 1857, 211; 1859, 29; 1860, 37.
——, report of committee on the registration of periodical phenomena of, 1845, 321; 1849, 78; 1850, 338.
Veins, mineral, on the state of knowledge respecting, by J. Taylor, 1833, 1.
——, metallic, report of experiments on the electricity of, by R. W. Fox, 1837, 133.
Velocity-measuring machine, 1844, 90.
Veneridæ of the West coast of North America, P. P. Carpenter on the, 1856, 305.
—— of Strangford Lough, 1857, 105–109.
Vermetidæ of the West coast of North America, 1856, 324.
Vermetus of the Ægean Sea, 1843, 137, 189; South European, 1850, 266 *et seq.*; North-east Atlantic, 1856, 149.
Vertebrata, state of our knowledge respecting the, by Rev. L. Jenyns, 1834, 160.
——, Irish, W. Thompson on the, 1840, 358; 1852, 291; catalogue of, 1840, 401.
—— of North America, 1836, 137.
——, *vide* Fauna of Ireland.
—— and land animals, traces of, taken in the dredge, Prof. E. Forbes on, 1850, 247.
Vertebrate skeleton, report on the archetype and homologies of the, by Prof. Owen, 1846, 169–340:—
Part I. Special homology, 169.
Part II. General homology, 240.
Part III. Serial homology, 332.
Table I. Synonyms of the bones of the head of vertebrata, 338.
Table II. Synonyms of the elements of the typical vertebra, 338.
Table III. Synonyms of the bones of the head, 338.
Vespertilio of North America, 1836, 138; of Ireland, 1840, 358; 1852, 291.
Vesta, planet, discovery of, 1831–32, 157.
Vetches, Prof. Buckman on the growth of, 1857, 208; 1859, 29.
Vibrations, musical, in tubes, on, 1833, 140.
——, propagation of, along a cylindrical tube, 1847, 75; along a solid bar, 78; through a solid mass, 79.
Vicia angustifolia, Prof. Buckman on the growth of, 1857, 208; 1859, 29.
Vinegar, Prof. Johnston on the manufacture of, 1831–32, 504.
Viola odorata, Prof. Buckman on the growth of, 1859, 24.
Vitrifaction and other applications of high heat, report on a gas-furnace for experiments on, by Rev. W. V. Harcourt, 1844, 82.
Volcanic action in N. America, on, 1834, 7.
—— action, M. Bischoff's theory of, 1847, 39.
—— forces, mode of action of, 1847, 35.
Volcanos, W. Hopkins on the phenomena and theories of, 1847, 33; chemical theory of, 38.
Voltaic electrometers of the Kew observatory, 1844, 123; comparison of, 135; 1851, 337.
Voluta, Dr. Carpenter on the structure of the shell of the, 1847, 109.
Vulturidæ of North America, 1836, 167, 168, 191; of Dukhun, 1837, 248; of Ireland, 1852, 291.

Water, Rev. W. Vernon Harcourt on the

claim of Watt and Cavendish to the discovery of the composition of, 1839, 8.
Water, Prof. Johnston on the maximum density of, 1831–32, 453.
——, on the colouring matter of, 1836, 35.
——, instruments for drawing it up from great depths, Dr. Daubeny on, 1836, 5.
—— of towns, Dr. R. A. Smith on the, 1848, 16; 1851, 66.
—— to towns, report by J. F. Bateman on the supply of, 1855, 62:—
Introduction.
1. From springs, 65.
2. From Artesian wells, or from the water to be obtained from absorbent geological strata, 69.
3. From rivers, 72.
4. From gathering grounds, where the surplus water of wet seasons is collected into large storeage reservoirs, 73.
5. From natural lakes, 77.
—— of wells, Dr. R. A. Smith on the, 1848, 22.
——, Rev. Prof. Challis on the compressibility of, 1833, 131.
——, Prof. J. Thomson on the measurement of, by triangular notches in weir boards, 1856, 46; 1858, 181; 1860, 217.
——, sea, comparative analytical researches on, by Prof. Forchhammer, 1846, 90.
—— and air, their action upon cast iron, wrought iron, and steel, 1838, 253; 1840, 221; 1843, 1.
—— and sulphuric acid, heat of combination of, 1849, 67.
Waters, mineral, sulphur in, 1831–32, 460; organic matter in, 521.
——, mineral and thermal, Dr. Daubeny's report on, 1836, 1–95:—
Definition.
Atmospheric water, 1.
Water of seas, 3.
Gases in sea-water, 6.
Water of lakes, 6.
Water of springs, 7:—
Temperature.
Chemical constitution.
Effects on the animal economy.
Analysis of mineral waters, 47.
On factitious mineral waters, 53.
Products of springs, 56.
Origin of springs in general, 58.
Origin of thermal springs, 59.
Geological position of thermal springs, 62.
Theories of thermal springs, 67.
Origin of the carbonic acid evolved from springs, 71.
Origin of the nitrogen in springs, 71.
Origin of the sulphuretted hydrogen in springs, 73.
Origin of salt springs, 74.
Works on mineral waters, 76.
Catalogue of thermal springs, 80–95.
Waterfalls, on employing the power of, 1848, 11.
Water-mill, double, 1847, 150.
Water-pressure engines, J. Glynn on, 1848, 11.
—— machinery, on the application of, by Sir W. G. Armstrong, 1854, 417.
Water-wheel, horizontal, of France and Germany, on the, 1847, 147.
——, vortex, Prof. J. Thomson on the, 1852, 317.
Watt's indicator for steam-engines, 1841, 308.
Waves, Rev. Prof. Challis on the problem of, 1833, 142.
——, results obtained by theory respecting the nature of, 1833, 147.
——, report on, by Sir J. Robison and J. Scott Russell, 1837, 417–496:—
Subjects of inquiry: What is a wave? Of what nature are the waves of the sea? Is the tidal elevation a wave obeying the same laws with any order of wave? Is the propagation of the tide-wave affected by local winds? and, if so, in what manner?
Method of inquiry, 420.
General results of these inquiries, 423.
First series of observations: experiments on waves in artificial reservoirs, 428.
Experimental apparatus, 432.
Second series of observations: on the waves of the sea, 445.
Third series of observations: on the tide-wave of the River Dee, 451.
Fourth series of observations: on the tide-wave of the River and Frith of Clyde, 457.
Description of the tables containing the original observations of the waves in artificial channels, made in 1837, 463.
Explanation of tables, 436; tables, 465.
Description of plates, 495.
——, further reports on, 1838, 315; 1840, 441; 1841, 325.
——, report on, by J. S. Russell, 1844, 311:—
Introduction, 311.
The nature of waves and their variety, 313.
Table I. System of water waves, 317.
Section I. Wave of the first order (the wave of translation), 319, 330.
Table II. History of a solitary wave of the first order, 326.
Table III. Determination of the velocity of the wave of the first order, 329.
Table IV. Velocity of larger waves, 330.
Table V. Velocity of smaller waves, 330.

Waves, *continued.*
Table VI. Small waves, 335.
Table VII. Large waves, 336.
Table VIII. Re-discussion of the observations by the method of curves, 337.
Table IX. Velocity due to a wave of the first order, 338.
Table X. Phenomena of wave of the first order, 342.
Table XI. Observations on the velocity of negative waves of the first order, 348.
Table XII. Observations on the velocity of negative waves of the first order, 349.
Table XIII. Observed heights of a wave in channel of variable breadth, 353.
Table XIV. Observations in a channel of variable depth, 353.
Table XV. Observations on the wave of the first order in triangular channels, 355.
Table XVI. Observations on the lateral diffusion of the wave of the first order, generated in a narrow channel and transmitted into a wide reservoir, 358.
Table XVII. Observations on the diffusion of the wave of the first order round an axis of original transmission, 360.
Table XVIII. The velocity of the wave of the first order, 361.
Section II. Waves of the second order (oscillating waves), 363.
Table XIX. Observations on the length and velocity of waves of the second order, 367.
Table XX. Observations on the length and velocity of waves of the second order—in the sea, 371.
Table XXI. Length, period, and velocity of transmission of waves of the second order, 374.
Section III. Waves of the third order (capillary waves), 375.
Table XXII. Observations on the velocity, distance, and divergence of waves of the third order, 377.
Table XXIII. Comparison of experiments on the divergence due to given velocities of genesis, 379.
Table XXIV. For determining the velocity of currents or moving bodies by observations of divergence, 380.
Section IV. Waves of the fourth order (the corpuscular wave), 382.
Description of the plates, 383–390.
——, Prof. Stokes on the theory of, 1846, 4:—
Long waves, 4.
Oscillatory waves, 5.
Solitary waves, 8.
Waves, atmospheric, Prof. J. D. Forbes's remarks on, 1831–32, 235.
——, atmospheric, Sir J. F. W. Herschel on, 1843, 60, 98.
——, atmospheric, reports on, by W. R. Birt, 1844, 267; 1845, 112; 1846, 119, 372; 1847, 351; 1848, 35.
——, analogies of transmission of light and heat by, 1854, 351.
Weasels and martins of North America, 1836, 143; of Ireland, 1840, 359.
Weber's inductive inclinometer, 1842, 9.
Weeds, experiments on the growth of, by Prof. Buckman, 1857, 214; 1860, 39.
Weights and measures of Dukhun, Col. Sykes on the, 1837, 327.
Weir-boards, Prof. J. Thomson on the measurement of water by, 1856, 46; 1858, 181; 1860, 217.
Well-water, on, 1848, 22; 1851, 66.
Wells, artesian, on the supply of water to towns from, by J. F. Bateman, 1855, 69.
Werner's theory of mineral veins, &c., 1832, 369; 1833, 7.
Westgarth's water-pressure engine, 1848, 12.
Wheat, experiments on the growth of, by Prof. Buckman, 1857, 206; 1859, 42.
Whitelaw's water-mill, 1847, 159.
Wind, Prof. J. D. Forbes on, 1831–32, 246; 1840, 102, 155.
——, Prof. Phillips's anemometrical researches, 1846, 340; 1848, 97.
Winds, as connected with barometrical movements, Sir J. F. W. Herschel on the, 1843, 99.
—— of Dukhun, Col. Sykes on the, 1837, 236.
Wind-vane of the Kew observatory, 1844, 29.
Woloff language, 1847, 159.
Wolves, American, 1836, 145.
Wood, on the cause of the formation of, 1833, 36.
——, mean strength and elasticity of various kinds of, 1833, 103.
Wood-engraving as applied to ornithology, 1844, 201.
Worms, British, Dr. T. Williams on, 1851, 159.

Xanthin, a colouring matter, Dr. Schunck on, 1848, 58, 69.
Xyphiidæ of the sea of Japan, 1845, 276.
—— of the London clay, 1844, 308.

Yarriba language, 1847, 171.

Zeidæ of the China and Japan seas, 1845, 266.
Zenith distances, on instruments for measuring, 1831–32, 133.
Zinc, action of sulphuric acid on, 1831–32, 477; oxide of, 477.
—— as a protection to iron against corrosion, 1838, 290; 1840, 246; 1843, 20.

Zinc, solution of, in nitric acid, Dr. T. Andrews on the heat of combination of, 1849, 75.
——, sulphate of, and chloride of barium, or nitrate of barytes, or acetate of lead, Dr. T. Andrews on the heat of combinations of, 1849, 72, 73.
—— in mineral waters, 1836, 15.
Zinc-paint as a covering for iron, 1840, 241.
Zoantharia, list of, from the coast of Ireland, 1858, 180.
——, British, 1860, 233.
Zodiacal light, on the radiation of heat from the, 1854, 354.
Zonuridæ, American, 1836, 200.
Zoological nomenclature, report of a committee on, 1842, 105; 1843, 119; of the Annelida, 1851, 159.
Zoology, report on the progress of, by the Rev. L. Jenyns, 1834, 143–251:—
1. Introduction, 144.
2. Of the primary types of form, and their leading divisions, in the animal kingdom, 149.
3. Of the several classes in the animal kingdom, 159.
I. Vertebrata, 160:—
1. Mammalia.
2. Aves.
3. Reptilia.
4. Pisces.
II. Annulosa, 184:—
1. Annelida.
2. Crustacea.
3. Arachnida.
4. Myriapoda.
5. Insecta.
III. Mollusca, 213:—
1. Cephalopoda.
2. Pteropoda.
3. Gasteropoda.
4. Brachiopoda.
5. Tunicata.
6. Cirripeda.
IV. Radiata, 227:—
1. Echinodermata.
2. Entozoa.
3. Acalepha.
4. Polypi.
5. Infusoria.
Conclusion, 246.
——, North American, report on, by Sir J. Richardson, 1836, 121–224:—
Introduction.
Physical geography, 123.
Climate, 128.
Observations on the Mammalia:—
Quadrumana, 137.
Carnivora, 138.
Marsupialia, 149.
Rodentia, 150.
Edentata, 158.
Pachydermata, 159.
Ruminantia, 159.
Cetacea, 161.
Zoology, *continued.*
Aves, 164.
Reptilia, 197.
Pisces, 202.
——, marine, British, report on the investigation of, by means of the dredge, by Prof. E. Forbes, 1850, 192:—
Introduction.
Table I. Analysis of dredging-papers drawn up on the southern and western coasts of England, 196.
Table II. Enumeration of the depths, &c. at which species of testaceous Mollusca were taken on the southern and western coasts of England, 200.
Table III. Enumeration of the depths, &c. at which species of Echinodermata were taken on the southern and western coasts of England, 211.
Table IV. Analysis of dredging-papers drawn up on the western and northern coasts of Scotland, 212.
Table V. Enumeration of the depths, &c. at which species of testaceous Mollusca were taken on the northern and western coasts of Scotland, 220.
Table VI. Enumeration of the depths, &c. at which species of Echinodermata were taken on the northern and western coasts of Scotland, 239.
Record of classes and tribes partially observed:—
Mollusca Nudibranchiata, 241.
—— Cephalopoda, 241.
—— Ascidia, 241.
—— Bryozoa, 242.
Crustacea, 243.
Cirripedes, 244.
Annelida, 244.
Zoophyta, 245.
Amorphozoa, 246.
Plants taken by the dredge, 246.
Traces of Vertebrata and land animals taken by the dredge, 247.
Fossil remains taken by the dredge, 247.
General considerations:—
Numerical distribution of species in depth, 248.
How far the nature of the sea-bottom determines the number and diffusion of species, 250.
Gregarious and prolific species, 251.
Generic and subgeneric groups confined to particular zones in depth, 253.
Relation of colour to distribution, 254.
Condition of the exuviæ of marine Invertebrata taken in the dredge, 254; phenomena of the horizontal distribution of species on the western shores of Great Britain, 254.
The northern and southern provinces of the western coast of Great Bri-

Zoology, marine, *continued.*
tain may be distinguished by certain Mollusca of the littoral zone, 255.
The differences between the northern and southern provinces are equally shown by the sublittoral Testacea, 255.
Numerical comparisons of the Testacea and hard Echinodermata inhabiting the regions explored, with the number of British species, 257.
Causes which seem to determine or to have determined the peculiarities of the horizontal distribution of species on the western coast of Great Britain, 261.
Desiderata, 263.

Zoology, marine, of Great Britain, reports on, 1840, 444; 1841, 331; 1842, 213; 1844, 390; 1850, 192; 1857, 104; 1858, 176, 282; 1859, 116.
—— of Ireland, on the, 1840, 353; 1843, 245; 1852, 290; collections illustrative of the, 1843, 289.
—— of Dukhun, Col. Sykes on the, 1837, 245.
Zoophytes, Rev. L. Jenyns on the state of our knowledge of, 1834, 236.
—— of the Ægean Sea, Prof. E. Forbes on the, 1843, 151.
——, British, and localities, Prof. E. Forbes on the, 1850, 245.
—— of Ireland, on the, 1843, 282; 1852, 296; 1857, 235.
—— of the Frith of Clyde, 1856, 51.

REESE LIBRARY OF THE UNIVERSITY OF CALIFORNIA.

REPORTS, &c.

INDEX OF PLACES.

Aberdeen and suburbs, vital statistics of, 1842, 121.
——, A. Thomson's report on the industrial feeding schools of, 1859, 44.
Abyssinia, on the table-land of, 1846, 70.
——, on the languages of, 1847, 223.
Acapulco, a list of the shells of, 1856, 170, 282, 285, 354.
Adriatic, geological section across Europe from the north of Scotland to the, 1832, 412.
Ægean Islands, earthquakes of the, 1858, 18.
—— Sea, report on the mollusca and radiata of the, by Prof. Forbes, 1843, 130.
Africa, short notice of the bibliography of the ornithology of, 1844, 191.
——, on the languages of, 1847, 154.
——, on the ornithology of, 1844, 191.
——, on the ethnographical philology of, 1847, 154.
——, islands of the Atlantic, mean temperature of each month, each season, and whole year in, 1847, 373 (Table 6).
——, Northern, earthquakes of, 1858, 17.
——, South, mean temperature of each month, each season, and whole year in, 1847, 373 (Table 18).
——, Southern, on the magnetic survey of, 1842, 4.
Airedale, on the lead-mining district in, 1858, 169.
Alabama, State of, organic remains in, 1834, 61.
Algiers, on the earthquakes of, 1858, 17.
——, Bay of, marine invertebrata of, 1850, 284.
Alston Moor, some galvanic experiments at the lead district of, 1839, 23.
America, on the languages of, 1847, 250.
——, Central, short notice of the bibliography of the ornithology of, 1844, 194.
——, Central, earthquakes of, 1858, 24.
——, North, H. D. Rogers's report on the geology of, 1834, 1–66:—
Physical geography, 1.
Geology of the United States, 6.
Volcanic action, 7.
Alluvial deposits, 8.
Recent changes in the Mississippi, 9.
Alluvial terraces, 10.

America, North, *continued.*
Of the coast islands, and their probable origin, 11.
Raised estuary formations of the Gulf of Mexico, 13.
Diluvial action over North America, 14.
Ancient alluvium, 18.
Fossil mammalia of the United States, 23.
Localities of fossil mammalia, 25.
Tertiary formations, 29.
Synoptical table of recent and tertiary formations of the United States, 30.
Newer pleiocene of St. Mary's County, Maryland, 33.
Formations of the older pleiocene and meiocene periods, 35.
Geographical range of the older pleiocene and meiocene formations, 36.
Older tertiary, or eocene, 43.
Steps in the history of the tertiary formations of the United States, 49.
Cretaceous formations, 50.
Calcareous formations, 51, 56.
Ferruginous sands of New Jersey, 52, 56.
Nummulite limestone, 59.
Organic remains discovered in New Jersey, Delaware, and Alabama, 61.
——, North, report on the zoology of, 1836, 121:—
Physical geography, 123.
Climate, 128.
Mammalia, 137.
Cetacea, 161.
Aves, 164.
Reptilia, 197.
Pisces, 202.
——, North, short notice of the bibliography of the ornithology of, 1844, 192.
——, North, on the magnetic survey of, 1841, 40; 1842, 4; 1843, 59; 1844, 147; 1845, 3.
——, North, on the mollusca of the west coast of, 1856, 159.
——, South, short notice of the bibliography of the ornithology of, 1844, 195.
——, South, mean temperature of each month, each season, and whole year in, 1847, 373 (Table 5).

Amlwch copper-mines, on the torrefaction of yellow copper pyrites at, 1831–32, 78.
Anastasia Island, eastern coast of Florida, geology of, 1834, 11.
Anglesea, dredging-operations round the coast of, 1844, 390.
Antilles, earthquakes of the, 1858, 25.
Antrim, marine zoology of the coast of, 1858, 282.
Arctic regions, temperature of the, 1831–32, 216.
—— regions, mean temperature of each month, each season, and whole year in the, 1847, 373 (Table 1); 1848, 84 (Table 1).
Arkendale, on the lead-mining district in, 1858, 168.
Armagh and Dublin, determination of the arc of longitude between the observatories of, 1839, 19.
Artrea, co. Tyrone, chemical examination of the Permian magnesian limestone of, 1859, 67.
Ashantee, languages of, 1847, 169.
Asia, earthquakes of the northern zone of, 1858, 28, 29, 30.
—— Minor, short notice of the bibliography of the ornithology of, 1844, 185.
Astoria, fossil shells from the sandstone of, 1856, 367.
Atlantic Ocean, analysis of the water of the, 1846, 90.
——, earthquakes of the basin of the, 1858, 19.
——, islands of the, mean temperature of each month, each season, and whole year in the, 1847, 373 (Table 6).
——, North-east, and neighbouring seas, on the marine testaceous mollusca of the, 1856, 101, 134.
Aust Cliff, near Bristol, on the fossil reptiles of, 1839, 60, 78, 80, 83; 1841, 159.
Australia, report on the extinct mammals of, by Prof. Owen, 1844, 223.
——, short notice of the bibliography of the ornithology of, 1844, 189.
——, mean temperature of each month, each season, and whole year in, 1847, 373 (Table 18).
Austria, magnetic survey of, 1844, 148.
Austrian dominions, mean temperature of each month, each season, and whole year in, 1847, 373 (Table 14).

Barbary, coast of, on the mollusca and other marine animals of, 1850, 264.
Barrow, Point. *See* Point Barrow.
Battle, on the Hylæosaurus from the Wealden formation of, 1841, 111.
—— Abbey, on the Cetiosaurus of the Wealden near, 1841, 99.
Bay of Naples, marine invertebrata of the, 1850, 298.
Belfast Bay, mollusca of, 1857, 220.
——, zoophytes of, 1857, 235.
——, crustacea of, 1858, 291.
——, polyzoa of, 1858, 293.
Belfast Dredging committee, reports of the, 1855, 143; 1857, 220; 1858, 282, 288; 1859, 116.
Belgium, earthquakes of, 1858, 11.
——, on the state of mathematics in, 1835, 35.
—— and Holland, mean temperature of each month, each season, and whole year in, 1847, 373 (Table 9).
Bengal, on the temperature and rain in, 1852, 252.
Birmingham, on the meteorology of, 1852, 297.
——, Mr. Osler's report on the observations recorded by the self-registering anemometer at, 1840, 321.
Bitton, Gloucestershire, on the fossil reptiles from the lias of, 1839, 62, 71, 77, 116.
Bognor, on the Crocodilus Spenceri from the eocene clay of, 1841, 67.
Bolney, on the Hylæosaurus from the Wealden formation of, 1841, 111.
Bombay, on some points in the meteorology of, by General Sabine, 1845, 73.
—— observatory, 1845, 75.
Bonny, Africans of the neighbourhood of, 1846, 117.
Bornholm, on the alum slate of, 1844, 161.
Bornu, on the languages of, 1847, 184.
Breslau, observatory at, Prof. Von Boguslawsky on the magnetic observations of the, 1840, 431; 1842, 11; 1844, 154.
Bristol, on the Thecodontosaurus and Palæosaurus from the dolomitic conglomerate at Redland near, 1841, 153, 154.
——, Rev. Prof. Whewell's report on discussions of tide observations at, 1839, 13; 1840, 436; 1841, 30.
——, on the vertebra of Rysosteus from the bone-beds of Aust Passage near, 1841, 159.
—— Channel to the English Channel, report on a level line measured from the, 1838, 1, 11.
Britain, short notice of the bibliography of the ornithology of, 1844, 181.
British Islands, magnetic survey of the, 1838, 49.
——, extension of the isoclinal and isodynamic lines into meridians east and west of the, 1838, 193.
——, list of the thermal springs of the, 1836, 80.
——, Prof. Owen's report on the fossil reptiles of the, 1839, 43; 1841, 60.
——, Prof. E. Forbes's report on the distribution of pulmoniferous mollusca in the, 1839, 127.
——, on a skeleton map of the, for recording the distribution of plants and animals, 1840, 444.
——, report on the fossil mammalia of the, by Prof. Owen, 1842, 54; 1843, 208.
——, synoptical table of the fossil fishes of the, by M. Agassiz, 1843, 194.

British Islands, report on the nudibranchiate mollusca of the, by J. Alder and A. Hancock, 1844, 24.
——, on the Annelida of the, 1850, 133.
——, on the Edriophthalma of the seas of the, 1855, 18.
——, on the oyster-beds of the, 1856, 368.
—— and Northern Isles, earthquakes of the, 1858, 5.
Burham, in Kent, on chelonites from the lower chalk at, 1841, 173, 176.

Cadiz and Cape Trafalgar, mollusca obtained between, 1850, 272, 273.
Caen, on the Teleosauri of, 1841, 75.
Caffraria, languages of, 1847, 189, 191, 218.
Cagliari, Gulf of, marine invertebrata of the, 1850, 299.
California, Upper, physical condition of, 1856, 161; mollusca of, 1856, 161, 192, 209, 225, 226, 235, 285, 289, 354.
——, Gulf of, 1856, 161.
Cambridge, on the Raphiosaurus from the chalk formations near, 1841, 145.
——, on a fossil turtle (Chelone pulchriceps) from the greensand near Barnwell, 1841, 172.
——, on the fossil bear from the Manea Fen, 1842, 64, 69.
——, proceedings of the magnetic and meteorological conference held at, 1845, 1.
Cambridgeshire, land and freshwater mollusca indigenous to, 1839, 133.
Canada, on the meteorology of Toronto in, 1844, 42.
——, magnetical and meteorological observations made at the observatory at Toronto, 1841, 38; 1844, 144.
——, mean temperature of each month, each season, and whole year in, 1847, 373.
——, earthquakes of, 1858, 23.
—— and United States, mean temperature of each month, each season, and whole year in, 1847, 376 (Tables 1, 2, 3, 4).
Canary Islands to the North Cape, on the marine testaceous mollusca of, 1856, 101.
Cape of Good Hope, observatory of, 1832, 129.
——, report for increasing the instrumental power of the Royal observatory at, 1839, 172.
——, observations of the remarkable magnetic disturbance of September 1841, made at the magnetic observatory at, 1841, 351.
Cape St. Mary's, Portugal, mollusca obtained at, 1850, 269.
Carolina, North, on the older pleiocene and meiocene formations of, 1834, 40, 43; ferruginous sands of, 58.
——, South, on the older pleiocene and meiocene formations of, 1834, 40; ferruginous sands of, 58.
Carthagena, marine fauna of, 1850, 282.
Cascaes Bay, Lisbon, mollusca obtained in, 1850, 269.
Catania and Syracuse, marine invertebrata of, 1850, 296.
Cavan, Lower, townland of, co. Donegal, chemical examination of the chloritic slate of, 1859, 73.
Cheltenham, chemical examination of the Permian magnesian limestone of, 1859, 67.
Chili, on the earthquakes of, 1858, 27.
China, mean temperature of each month, each season, and whole year in, 1847, 373 (Tables 17 and 18).
—— seas, proposed survey of the, 1844, 148.
—— and Japan seas, Dr. Richardson's report on the ichthyology of, 1845, 187.
Chinese Tartary, mean temperature of each month, each season, and whole year in, 1847, 373 (Table 16).
Chipping Norton, on the fossil reptiles of the oolite near, 1841, 81, 88, 100.
Cirencester, Prof. Buckman's reports on the experimental plots in the Botanical Garden of the Royal Agricultural College at, 1857, 200; 1859, 22.
——, Dr. Voelcker's report of experiments on the essential constituents of manures, 1859, 31.
Claiborne Bluff, North America, on the strata composing the, 1834, 46.
Clyde, Frith of, report on dredging the, 1856, 47; mollusca of, 49; nudibranchiate mollusca of, 50; crustacea of, 50; echinodermata of, 51; zoophyta of, 51.
Collyhurst, report on the excavation made at the junction of the lower new red sandstone with the coal-measures at, 1843, 241.
Comrie, on the shocks of earthquakes at, 1841, 49; 1842, 92; 1843, 120; 1844, 85.
Conijera near Cabrera, marine invertebrata of, 1850, 303.
Corfu and Ionian Islands, report on the marine zoology of, 1844, 390.
Cornwall, R. W. Fox's report on subterranean temperature in the mines of, 1840, 309; 1857, 96.
Cuba, on the earthquakes of, 1858, 26.
Cumberland, on the whin sill of, 1831–32, 76, 77.

Dahomey, languages of, 1847, 170.
Dalla, language of, 1847, 207.
Danube, basin of the, earthquakes of the, 1858, 14.
Davis's Straits, analyses of the sea-water of, 1846, 91.
Delaware, State of, on the older pleiocene and meiocene formations of, 1834, 36.
——, ferruginous sands of, 1834, 58.
——, organic remains in, 1834, 61.
Denmark, mean temperature of each month, each season, and whole year in, 1847, 373 (Table 15).
Devon and Exeter Savings' Bank (1827 to 1833), analysis of depositors in the, 1845, 139.
Devonport, tables, &c. of observations made

with Whewell's anemometer at Mount Wise, 1838, 28.
Devonport, report on the meteorological observations made at, 1843, 291.
Devonshire, report on subterranean temperature in the mines of, by R. W. Fox, 1840, 309.
Downhill, co. Londonderry, chemical examination of the magnesian conglomerate from, 1859, 69.
Drogheda, chemical examination of the lower limestone shales of, 1859, 72.
Dublin, report on the crustacea of the district of, 1858, 262.
——, the remarkable plants of the neighbourhood of, 1836, 253.
—— committee, report on the pathology of the brain and nervous system, 1836, 283.
—— sub-committee, report on the motions and sounds of the heart, 1835, 243; 1836, 275.
—— dredging committee, report of the, 1858, 262.
—— Bay dredging committee, report of the, 1859, 80.
—— Bay, Prof. Kinahan's report on dredging, 1860, 27.
—— and Armagh, observatories of, Rev. Dr. Robinson's notice of the determination of the arc of longitude between the, 1839, 19.
Dukhun, on the statistics of, 1837, 217:—
Extent and physical circumstances.
Geology.
Climate.
Botany.
Zoology.
Civil divisions.
Population.
Education.
Irrigation.
Agriculture.
Land and other tenures.
Revenue.
Assessments.
Wages.
Manufactures.
Transit duties.
Coins.
Weights and measures.
Army.
Dundee, vital statistics of, 1842, 121.
Durham, chemical examination of the Permian magnesian limestone of, 1859, 67.

Edinburgh, longitude of, 1839, 19.
——, remarkable plants of the neighbourhood of, 1836, 253.
—— sub-committee, report on the registration of deaths, 1835, 251.
—— and suburbs, vital statistics of, 1842, 121.
Egypt, on the language of, 1847, 254.
——, mean temperature of each month, each season, and whole year in, 1847, 373 (Table 15).
England, magnetic observations in, 1838, 67–86, 138.
——, progress of hydraulic engineering in, with reference to rivers, canals, and drainage, 1834, 447, 473.
English Channel to the Bristol Channel, report on a level line measured from, 1838, 1, 11.
Exhall, Coventry, chemical examination of the Permian magnesian limestone at, 1859, 67.
Europe from the North of Scotland to the Adriatic, geological section across, 1832, 412.
——, short notice of the bibliography of the ornithology of, 1844, 180, 182.
——, on the earthquakes of, 1858, 28, 30.

Faroë Islands, Iceland, and Greenland, analyses of the sea-water between the, 1846, 91.
Fernando Po, language of, 1847, 173.
Forth, Frith of, tidal wave of, 1840, 442.
——, ——, J. S. Russell's report of observations on the tides of the, 1843, 110.
France, thermal springs of, 1836, 84, 86, 88.
——, ornithology of, 1844, 183.
——, on the turbine or horizontal water-wheel of, by J. Glynn, 1847, 147.
——, mean temperature of each month, each season, and whole year in, 1847, 373 (Table 8).
——, on the earthquakes of, 1858, 11.

Gaboon, languages of the, 1847, 174.
Galapagos Islands, on the birds of the, 1844, 194; list of the shells of the, 359.
German Ocean, analyses of the water of the, 1846, 91.
Germany, thermal springs of, 1836, 80, 82.
——, on the turbine or horizontal water-wheel of, by J. Glynn, 1847, 147.
——, mean temperature of each month, each season, and whole year in, 1847, 373 (Tables 9, 10, 11, 12, 13); 1848, 84 (Table).
Gibraltar, mollusca obtained at, 1850, 275.
Glasgow, vital statistics of, 1842, 121.
——, Greenock, and Port Glasgow, report on the animal, vegetable, and mineral substances imported from foreign countries into, 1858, 185.
Gonga, language of, 1847, 206.
Great Britain, on the magnetic survey of, 1838, 49; 1857, 130; 1858, 185, 260; 1859, 167.
——, reports on the marine zoology of, 1840, 444; 1841, 331; 1842, 213; 1844, 390; 1850, 192; 1858, 282; 1859, 116.
——, Prof. Owen's report on the British fossil mammalia of, 1842, 54.
——, reports for registering shocks of earth-

quakes in, 1841, 46; 1842, 92; 1843, 120; 1844, 85.
Great Britain, on the structure, functions, and economy of the Araneidea of, 1844, 62.
——, on the progress of savings' banks in, 1845, 129.
——, on the progress of the iron-manufacture in, 1846, 99.
——, mean temperature of each month, each season, and whole year in, 1847, 373 (Tables 6 and 7).
——, report on the infra-littoral distribution of marine invertebrata on the southern, western, and northern coasts of, 1850, 192.
——, statistical statement of life-boats and fishing-boats on the coasts of, 1857, 308.
——, report on shipping statistics in, 1858, 239.
Greece and its islands, thermal springs of, 1836, 95.
——, short notice of the bibliography of the ornithology of, 1844, 184.
Greenwich, observatory of, 1832, 126.
—— observatory, the only one at the beginning of the century in which observations were made on any regular system, 1831–32, 126.
—— lunar and planetary observations, on the reduction of the, 1840, 423.
—— observations of the moon, report of the committee and grant for reducing the, 1838, 315.
——, variations of the temperature, vapour pressure, gaseous pressure, and force of wind at, compared with Toronto, 1844, 60, 61.
Guiana, British, observatory in, 1845, 2.
Gweedore River, co. Donegal, chemical examination of the metamorphic limestone near, 1859, 75.

Harwich, on an Emydian chelonite from the eocene clay near, 1841, 160.
Herne Bay, fossil Bos primigenius of, 1843, 233.
Holland, earthquakes of, 1858, 11.
—— and Belgium, mean temperature of each month, each season, and whole year in, 1847, 373 (Table 9).
Horsham, on the Iguanodon from the Wealden quarry near, 1841, 127, 129, 139, 140.
Howth, co. Dublin, chemical examination of the dolomite of, 1859, 68.
Hull, on the rise, progress, and position of steam navigation in, 1853, 45, 50; 1857, 57; 1859, 119.
Humber, on the physical features of the, 1853, 36.
Hythe, on the gigantic fossil saurian from the lower greensand at, 1841, 157.

Iceland, thermal springs of, 1836, 95.
Iceland, on the earthquakes of, 1858, 3.
India, British, short notice of the bibliography of the ornithology of, 1844, 186.
——, magnetic observations made at the observatories of, 1845, 3.
——, on the relation of the Bengali to the Arian and aboriginal languages of, 1847, 319.
——, on the Hindûs of, 1850, 169.
——, on river steamers with reference to the necessity for improving the shallow-water navigation of, 1858, 268.
——, Prof. Owen's report on a series of skulls of various tribes of mankind from Nepal, 1859, 95.
——, mean temperature of each month, each season, and whole year in, 1847, 373 (Tables 17 and 18).
——, on the aboriginal tribes of, 1850, 169.
——, on the physical and economical effects of the destruction of the forests of, 1851, 78.
——, timber trees of, 1851, 97.
——, on the earthquakes of, 1858, 39.
Indian and Pacific Oceans, on the tides of, 1847, 134.
Inverness, Sir D. Brewster's report on the hourly meteorological observations kept at, 1839, 27.
——, reports on the erection of Osler's anemometer at, 1841, 329; 1842, 206.
——, reports on the hourly meteorological observations made at, 1840, 349; 1841, 329; 1842, 206; 1843, 292; 1844, 391.
Ionian Islands, marine zoology of the, 1844, 390.
Ireland, on the progress of inland navigation in, 1834, 481.
——, magnetic chart of, 1835, 163.
——, determination of the arc of longitude between the observatories of Armagh and Dublin, 1839, 19.
——, on the iron-manufacture in, 1846, 99.
——, magnetic survey of, on the instruments employed in the, 1858, 260.
——, on the remarkable plants of, 1836, 253, 257.
——, on the direction and intensity of the terrestrial magnetic force in, 1835, 117.
——, Rev. Dr. H. Lloyd on the magnetic isoclinal and isodynamic lines in, 1838, 91, 165.
——, insects of, 1843, 290.
——, infusoria of, 1843, 291.
——, report on subterranean temperature in, 1844, 221.
——, on the progress of savings' banks in, 1845, 129.
——, history of flax cultivation in, 1852, 273.
——, report on the marine fauna of the S. and W. coasts of, 1858, 176.
——, Mr. W. Thompson's report on the

fauna of, 1840, 353; 1843, 245; 1852, 290.
Ireland, on the freshwater fishes of Ulster, 1852, 290.
——, on the pulmoniferous mollusca of, 1839, 137.
——, report on the nudibranchiate mollusca of, 1844, 24.
——, on the marine zoology of Strangford Lough, co. Down, 1857, 104.
——, list of shells taken in deep water off the Maiden's Lighthouses, Larne Lough, 1857, 234; 1858, 285; 1859, 116.
——, dredging Belfast Bay, 1855, 143; 1857, 220; 1858, 282, 288; 1859, 116.
——, on the marine zoology of Strangford Lough, co. Down, 1857, 104.
——, list of shells from the Turbot Bank, coast of Antrim, 1857, 229; 1858, 287; 1859, 116.
——, dredging Dublin district, 1858, 262; 1859, 80.
——, on the marine zoology of the coast of Antrim, 1858, 282.
——, list of shells from Larne Lough, 1858, 284; 1859, 116.
——, chemical examination of the Permian magnesian limestone of Artrea, co. Tyrone, 1859, 67.
——, chemical examination of the Permian magnesian rocks of Templereagh, 1859, 67.
——, chemical examination of the dolomite of St. Howth, co. Dublin, 1859, 68.
——, chemical examination of the magnesian conglomerate from Downhill, co. Londonderry, 1859, 69.
——, chemical examination of the pseudo-dolomite from Stone Park, co. Limerick, 1859, 70.
——, chemical examination of hydraulic limestone from the environs of Milltown, co. Dublin, 1859, 71.
——, chemical examination of the lower limestone shales of Drogheda, 1859, 72.
——, chemical examination of the chloritic slate of Lower Cavan, co. Donegal, 1859, 73.
Isle of Wight, on the fossil reptiles of the, 1841, 87, 91, 92, 93, 94, 128, 168; fossil mammalia of the, 1843, 224, 225, 226.
Italian Peninsula, earthquakes of, 1858, 16.
Italy, thermal springs of, 1836, 92.
——, short notice of the bibliography of the ornithology of, 1844, 183.
——, mean temperature of each month, each season, and whole year in, 1847, 373 (Tables 13, 14).
——, southern coasts of, on the mollusca and other marine animals of the, 1850, 264.

Japan, short notice of the bibliography of the ornithology of, 1844, 185.
—— and China seas, report on the ichthyology of, by Dr Richardson, 1845, 187.
Kent's Hole, near Torbay, fossil mammalia of, 1842, 56, 57, 63, 65, 66, 68, 70, 71; 1843, 222, 224, 230, 239.
Kew observatory, report on the discussion of the electrical observations at, 1849, 113.
——, observatory of the British Association at, 1844, 120; 1845, 341; 1849, 80; 1850, 176; 1851, 335.
——, the building, instruments, &c., 1844, 120; 1845, 341; 1849, 80; 1850, 177; 1851, 336.
——, observations, 1844, 130; 1845, 341; 1850, 179; 1851, 354.
——, experiments, &c., 1844, 135; 1845, 341; 1849, 81; 1850, 181; 1851, 358.
——, the Journal, 1844, 130.
——, electro-meteorological observations, 1844, 132; 1851, 357.
——, specimens of storm-papers, 1844, 134.
——, frequency-paper, 1850, 179.
——, library, 1851, 354.
——, miscellaneous memoranda, 1851, 368.
——, report on the magnetographs, by General Sabine, 1851, 325.
——, report on the performance of Ronalds's three magnetographs, by J. Welsh, 1851, 328.
——, description of a self-recording anemometer at, 1858, 306.
——, account of the construction of the self-recording magnetographs, 1859, 200.
——, photoheliography at, 1859, 149.
Kingstown Bay, shells obtained in, 1860, 29.
Kingussie, report on the hourly meteorological observations at, 1839, 27.
Kirby Moorside, fossil mammalia from the cave at, 1842, 71.
Kirkdale, fossil remains of the cave at, 1842, 70, 71; 1843, 222, 223, 230; 1843, 222, 230.
Kyson, Suffolk, fossil reptiles of the eocene sand-beds at, 1841, 67, 145.
——, ——, fossil mammalia of, 1842, 55, 72.
——, ——, fossil mammalia of, 1842, 72; 1843, 228.

La Plata, basin of, earthquakes of, 1858, 27.
Larne Lough, list of shells from, 1858, 284; 1859, 116.
Leamington, on the Cladyodon from the new red sandstone of, 1841, 155.
Leith, tide observations made at, by Mr. D. Ross, the Rev. Prof. Whewell's report on the discussion of the, 1841, 33.
——, vital statistics of, 1842, 121.
Lesmahago, Lanarkshire, on the upper Silurians of, 1859, 63.
Levant, earthquakes of the, 1858, 18.
Limerick, chemical examination of the pseudo-dolomite from Stone Park in the county of, 1859, 70.
Lincolnshire, on the drainage of the fens of, 1834, 475.
Liverpool, report of the committee for the observatory at, 1838, 316.

Liverpool observatory, account of the self-registering anemometer and rain-gauge at, 1855, 127.
——, proportion of deaths by various diseases in, 1842, 198, 199.
——, on the effects produced upon the channels of the Mersey by the alterations made in its banks, 1856, 1.
——, statement as to the rights of the mayor, aldermen and burgesses to the lordship of, comprising the river Mersey, 1856, 23.
—— museum of naval architecture, 1857, 308.
——, on the animal and vegetable products imported into, 1857, 254.
London, on the supply of water to, 1855, 64.
Lyme, Dorsetshire, on the fossil reptiles in the lias of, 1839, 60, 62, 69, 72, 110, 114, 116.
Lyme Regis, on the fossil reptiles from the lias at, 1839, 76, 83, 112, 117, 121.
——, Pterodactylus macronyx in the lias of, 1841, 156.

Madras, on magnetical and meteorological observations made at, 1845, 5.
Mahon (S. Europe), marine invertebrata of, 1850, 301.
Maiden's Lighthouses, Larne Lough, list of shells taken in deep water off the, 1857, 234; 1858, 285; 1859, 116.
Maidstone, on the Iguanodon of the greensand quarries at, 1841, 120, 135; on a tooth of the Polyptychodon of, 156.
Makerstoun, longitude of, 1839, 19.
Malaga, shells procured at, 1850, 280.
Malasia, short notice of the bibliography of the ornithology of, 1844, 187.
Malay Archipelago, mean temperature of each month, each season, and whole year in the, 1847, 373 (Tables 17 and 18).
Malta, coast of, on the mollusca and other marine animals of, 1850, 264, 293, 294.
——, earthquakes of, 1858, 16.
Manchester, proportion of deaths by various diseases in, 1842, 198, 199.
——, E. W. Binney's report on the excavation made at the junction of the lower new red sandstone with the coal-measures at Collyhurst, 1843, 241.
—— and Salford bank for savings, classification of depositors in the, 1845, 141.
Market-Raisin, on a Pliosaurus from the Kimmeridge clay formation at, 1841, 61.
Maryland, St. Mary's County, on the newer pleiocene of, 1834, 33.
——, on the older pleiocene and meiocene formations of, 1834, 36, 42.
——, ferruginous sands of, 1834, 58.
Mazatlan, on the mollusca of, 1856, 224, 235, 237, 241, 289.
Mediterranean, coast of the, mean temperature of each month, each season, and whole year on the, 1847, 373 (Table 14).
——, Eastern, eight well-marked regions of depth in, each characterized by its peculiar fauna and flora, 1854, 154, 169.
Mendip Hills, fossil mammalia of the bone-caves of the, 1842, 70, 71; 1843, 222, 228, 230.
Mersey, on the effects produced on its channels by the alterations which have been made in its banks, 1855, 143; 1856, 1.
Mexico and the West Indies, mean temperature of each month, each season, and whole year in, 1847, 373 (Tables 4 and 5).
——, on the mollusca of, 1856, 225.
——, earthquakes of, 1858, 24.
——, Gulf of, raised estuary formations of the, 1834, 13.
Milltown, co. Dublin, chemical examination of hydraulic limestone from the environs of, 1859, 71.
Mississippi River, on changes in the, 1834, 9.
Mozambique, languages of, 1847, 193.

Naples, Bay of. *See* Bay of Naples.
Nepal, Prof. Owen's report on a series of skulls of various tribes of mankind from, 1859, 95.
Newbourne, Suffolk, fossil mammalia of, 1843, 229.
New Jersey, North America, on the older pleiocene and meiocene formations of, 1834, 36, 42.
——, ferruginous sands of, 1834, 52.
——, organic remains discovered in, 1834, 61.
New Zealand, report on the ichthyology of, by Dr. J. Richardson, 1842, 12.
——, short notice of the bibliography of the ornithology of, 1844, 191.
——, mean temperature of each month, each season, and whole year in, 1847, 373 (Table 18).
——, earthquake of 1854–55, 1858, 105.
Nidderdale, on the lead-mining district in, 1858, 168.
Norfolk, on the fossil teeth from the chalk of, 1841, 144.
Northumberland, on the whin sill of, 1831–32, 76, 77.
Norway, mean temperature of each month, each season, and whole year in, 1847, 373 (Table 15).
Nova Zembla, mean temperature of each month, each season, and whole year in, 1847, 373 (Table 16).
Nubia, languages of, 1847, 197.

Oregon, mollusca of, 1856, 209, 239, 348, 367.
Oreston, Devonshire, fossil mammalia in the caverns at, 1842, 63, 68, 70, 71; 1843, 221, 230, 231, 234.

Ottoman Empire, mean temperature of each month, each season, and whole year in the, 1847, 373 (Table 15).
Oxford, on the fossil reptiles of the Kimmeridge clay near, 1839, 79, 82, 83, 85, 86; 1841, 60, 61, 62, 81, 82, 168.
—— Botanic Garden, report of experiments on the growth and vitality of seeds in the, 1842, 34; 1843, 105; 1844, 94; 1845, 337; 1846, 20; 1847, 145; 1848, 31; 1849, 78, 1850, 160.

Pacific, on the mollusca of the, 1856, 159, 169, 175, 179, 215, 223, 363.
—— and Indian Oceans, on the tides of, 1847, 134.
Panama, on the mollusca of, 1856, 160, 225, 265, 267, 284, 289, 354.
—— shells, list of, 1856, 267.
Pantellaria, island of, marine invertebrata of, 1850, 291.
Paviland, on the fossil mammalia in the cave at, 1842, 63, 70, 71; 1843, 230.
Persia, mean temperature of each month, each season, and whole year in, 1847, 373 (Table 15).
Perth, vital statistics of, 1842, 121.
Perthshire, on the shocks of earthquakes at Comrie in, 1841, 49; 1842, 92; 1843, 120; 1844, 85.
Philadelphia, magnetic observatory at, Mr. A. D. Bache's letter relative to, 1842, 209.
Plata (La), basin of, earthquakes of, 1858, 27.
Plymouth, Sir W. S. Harris's reports on the hourly observations of the thermometer at, 1835, 181; 1838, 21; 1839, 149; 1842, 30.
——, the Astronomer Royal's report on the publication of the hourly observations made at, 1841, 328.
——, Sir W. S. Harris's report on Prof. Whewell's anemometer at, 1840, 157; 1841, 36.
——, Sir W. S. Harris's report on the results of the discussion of the meteorological observations made at, 1843, 291.
——, Sir W. S. Harris's report on the working of Whewell and Osler's anemometers at, 1844, 242.
Point Barrow, results of the thermometrical observations made at, by J. Simpson, 1857, 159.
Polynesia, short notice of the bibliography of the ornithology of, 1844, 189.
Portugal, thermal springs of, 1836, 94.
——, coast of, on the mollusca and other marine animals of, 1850, 264.
—— and Spain, mean temperature of each month, each season, and whole year in, 1847, 373 (Table 14).
Prague, barometric maxima and minima at, 1845, 111, 112.
——, meteorology of, compared with Toronto, 1844, 43.
Preston, on marine shells in the deposits about, 1831–32, 82.
Purbeck, Isle of, on a fossil turtle (Chelone obovata) from the estuary limestone formation of, 1841, 170.

Redland, near Bristol, on the Thecodontosaurus and Palæosaurus from the dolomitic conglomerate at, 1841, 153, 154.
Rhine, basin of the, and Switzerland, earthquakes of, 1858, 13.
Rhone, basin of the, earthquakes of the, 1858, 12.
Rome (ancient), on the supply of water to, 1855, 64.
Russia in Europe, Siberia, Chinese Tartary, and Nova Zembla, mean temperature of each month, each season, and whole year in, 1847, 373 (Table 16).

Sardinia, earthquakes of, 1858, 16.
Savoy, thermal springs of, 1836, 92.
Scandinavia, on the metamorphosis of the alum slate of, by Prof. Forchhammer, 1844, 155.
——, on the primitive inhabitants of, by Prof. Nilsson, 1847, 31.
Scandinavian Peninsula and Iceland, earthquakes of, 1857, 3.
Scarborough, on the pulmoniferous mollusca in the neighbourhood of, 1839, 135.
Scotland, on the progress of inland navigation in, 1834, 481.
——, magnetic chart of, 1836, 97.
——, remarkable plants of, 1836, 253, 257.
——, on the direction and intensity of the terrestrial magnetic force in, 1836, 97.
——, magnetic observations in, 1838, 86, 155.
——, on the two series of hourly meteorological observations kept in, 1839, 27.
——, hourly meteorological observations made at Inverness, 1839, 27; 1840, 349; 1841, 329; 1842, 206; 1843, 292; 1844, 391.
——, hourly meteorological observations at Unst, 1841, 329; 1843, 293.
——, on the progress of savings' banks in, 1845, 129.
——, on the progress of the iron-manufacture in, 1846, 99.
——, ordnance survey of, memorials to Her Majesty's Government relative to, 1851, 370.
——, on some results of the magnetic survey of, undertaken by John Welsh, by B. Stewart, 1859, 167.
——, reports on shocks of earthquakes in, 1841, 46; 1842, 92; 1843, 120; 1844, 85.
——, animal, vegetable, and mineral substances imported into the Clyde, 1858, 185.

Scotland, longitude of Edinburgh, 1839, 19; longitude of Makerstoun, 19.
——, on the erection of Osler's anemometer at Inverness, 1841, 329; 1842, 206.
——, tidal wave of the Frith of Forth, 1840, 442.
——, tide observations made at Leith, 1841, 33.
——, on the tides of the Frith of Forth, 1843, 110.
——, J. S. Russell's report of observations on the tides of the east coast of, 1843, 110.
——, experiments for the artificial production of salmon at Stormontfield, near Perth, 1856, 451.
——, on the pulmoniferous mollusca of, 1839, 138.
——, report on the nudibranchiate mollusca of, 1844, 24.
——, dredging the Frith of Clyde, 1856, 47.
——, on the upper Silurians of Lesmahago, 1859, 63.
——, report on the vital statistics of large towns in, 1842, 121.
——, on the industrial feeding schools of Aberdeen, 1859, 44.
Senftenberg, observatory at, on the self-registering meteorological instruments employed in the, by the Baron Senftenberg, 1845, 108.
Sheppey, fossil fish of, 1844, 279; list of, 307.
——, on the fossil reptiles of, 1841, 65, 161, 168, 177–180.
Shetland Isles, on the pulmoniferous mollusca of, 1839, 139.
Shotover, near Oxford, on the fossil reptiles from the Kimmeridge clay at, 1839, 82, 83, 85; 1841, 61, 64, 81, 82.
Shrewsbury, on the remains of the Rhynchosaurus from the new red sandstone quarries near, 1841, 145.
Siberia, short notice of the bibliography of the ornithology of, 1844, 185.
——, mean temperature of each month, each season, and whole year in, 1847, 373 (Table 16).
Sicily, earthquakes of, 1858, 16.
Singapore, magnetical and meteorological observations made at, 1845, 5.
Southampton, on the climate of, 1851, 54.
Spain, thermal springs of, 1836, 94.
——, short notice of the bibliography of the ornithology of, 1844, 184.
——, coast of, on the mollusca and other marine animals of the, 1850, 264.
—— and Portugal, mean temperature of each month, each season, and whole year in, 1847, 373 (Table 14).
Spanish Peninsula, earthquakes of the, 1858, 8.
St. Helena, observations of the remarkable magnetic disturbance of September 1841, made at the magnetic observatory at, 1841, 349.
St. Michael's, results of meteorological observations taken at, 1850, 133.
St. Petersburg, magnetic observatory at, 1841, 39.
Stonesfield, on the fossil reptiles from the oolite at, 1841, 81, 145.
——, on the Megalosaurus from the oolitic of, 1841, 103.
——, remains of Pterodactyles in the oolitic slate of, 1841, 156.
——, tortoises from the oolitic slate of, 1841, 160.
——, fossil mammalia of the oolitic calcareous slate of, 1842, 57.
Stormontfield, near Perth, on the experiments conducted at, for the artificial propagation of salmon, 1856, 451.
Stourton quarries, Cheshire, footsteps of Emydians in new red sandstone, 1841, 168.
Strangford Lough, co. Down, on the marine zoology of, 1857, 104.
Street (Somerset), on the fossil reptiles from the lias of, 1839, 60, 69, 77, 110, 112, 121, 122.
Suffolk, on a pleurodont lizard from the eocene sand at Kingston in, 1841, 145.
Surrey, on the spring-water of the greensand formation in, 1855, 66.
Sussex, on the fossil reptiles of the Wealden strata of, 1841, 67 *et seq.*
Sutton near Ashby, Manchester, chemical examination of the Permian magnesian limestone of, 1859, 67.
Swaledale, on the lead-mining district in, 1858, 168.
Swanage, on the fossil reptiles from the Purbeck limestone at, 1841, 70, 160.
——, on a chelonite from the Purbeck limestone at, 1841, 166.
Swansea, registration of periodical phenomena at, 1850, 350.
Sweden, on the primitive inhabitants of, 1847, 31.
——, mean temperature of each month, each season, and whole year in, 1847, 373 (Table 15).
Switzerland, thermal springs of, 1836, 90.
——, mean temperature of each month, each season, and whole year in, 1847, 373 (Table 9).
——, on the earthquakes of, 1858, 13.
Syracuse and Catania, marine invertebrata of, 1850, 296.
Syria, earthquakes of, 1858, 18.

Templereagh, chemical examination of the Permian magnesian rocks of, 1859, 67.
Tetham, on the Cetiosaurus from the Wealden formation at, 1841, 100.
Thames, River, on the course, dimensions, inclinations, and velocities of the, 1834, 486.
——, section of, from the River Kennet to the Nore Light, 1834, 512.
——, on the water of the, 1848, 26.

Tilgate Forest, on the fossil reptiles of, 1841, 67, 84, 85, 91, 92, 95, 110, 114, 118, 121, 124, 128, 134, 136, 137, 168, 172.
Timbuctoo, language of, 1847, 186.
Toronto, observations made at the magnetic observatory at, during a remarkable magnetic disturbance (September 1841), 1841, 340.
——, magnetical and meteorological observations made at the observatory at, 1843, 57; 1844, 144; 1845, 57.
——, magnetical and meteorological observatory, report on the expediency of continuing the, 1848, 99.
——, on the meteorology of, 1844, 42.
Trevandrum, observations of the remarkable magnetic disturbance of September 1841, made at the magnetic observatory of Travancore, 1841, 347.
Turbot Bank, coast of Antrim, list of shells from the, 1857, 229; 1858, 287; 1859, 116.
Turkey, European, thermal springs of, 1836, 95.
Turko-Greek Peninsula, earthquakes of, 1858, 18.

Ulster, on the freshwater fishes of, 1852, 290.
United States, geology of the, 1834, 6.
——, fossil mammalia of the, 1834, 23.
——, notice relative to the meteorology of the, 1842, 208.
——, tabular view of ranges of the barometer for 27- and 37-hourly observations at the equinoxes and solstices, 1843, 85.
——, mean temperature of each month, each season, and whole year in the, 1847, 373 (Table 1).
——, Prof. Henry on the system of meteorological observations proposed to be established in the, 1851, 320.
——, earthquakes of the, 1858, 23.
—— and Canada, mean temperature of each month, each season, and whole year in the, 1847, 373 (Tables 1, 2, 3, 4).
Unst, island of, report on the hourly meteorological observations at the, 1841, 329; 1843, 293.

Van Diemen Island, mean temperature of each month, each season, and whole year in, 1847, 373 (Table 18).
Vichy, thermal springs of, on the red ferruginous matter in the, 1836, 34, 35.
Vigo Bay, mollusca obtained in, 1850, 264.
Virginia, on the older pleiocene and meiocene formations of, 1834, 36, 42, 43.

Warwick, on the Cladyodon from the new red sandstone of, 1841, 155.
——, on the fossil reptiles (Batrachian) from the new red sandstone of, 1841, 181, 184.
Wensleydale, on the lead-mining district in, 1858, 168.
West Indies, short notice of the bibliography of the ornithology of the, 1844, 194.
—— and Mexico, mean temperature of each month, each season, and whole year in the, 1847, 373 (Table 5).
Weston, near Bath, on the fossil reptiles from the lias at, 1839, 60, 69, 77, 112.
Wharfedale, on the lead-mining district in, 1858, 168.
Whitby, on the fossil reptiles from the lias of, 1839, 83, 112, 116, 121; 1841, 73, 74, 77, 80, 90, 191.

York, on the quantities of rain falling at, 1833, 401; 1834, 560; 1835, 171.
Yorkshire, on the most remarkable phenomena in the geology of, 1831–32, 56.
——, on the lead-mining districts of, 1858, 167.
——, chemical examination of the Permian magnesian limestone of, 1859, 67.
——, on the crocodiles of the lias of, 1841, 74.
—— coast, on the character and measurements of degradation of the, 1853, 81.
Ystalyfera iron-works, on the advantageous use made of the gaseous escape from the blast furnaces at the, 1848, 75.

Zembretta, island of (Gulf of Tunis), marine invertebrata of the, 1850, 288.

SECTIONS.

INDEX OF AUTHORS.

[*The asterisk* (*) *signifies that no abstract of the author's communication is given.*]

ABERCROMBIE (Dr.) on the importance to the medical profession of the study of mental philosophy, 1834, 670.

*ABERNETHY (J.) on the rivers "Dee" forming the ports of Aberdeen and Chester, 1859, 228.

ABRAHAM (J. H.) on magnetism :—needle-pointing, instrument to guard the eyes of grinders of steel, and process for demagnetizing the steel balance-wheels of watches, 1831–32, 59.

ACLAND (Sir T. D.) on a remarkable movement of the Sulden glacier under the side of the Ortler Berg, 1847, 60.

*ADAIR (Mr.), notice of Patella ancyloides found on the coast of Arran, 1840, 137.

ADAM (Dr. Walter) on some symmetrical relations of the bones of the Megatherium, 1833, 437.

*ADAMS (Dr.) on the placental souffle, 1838, 123.

*ADAMS (Dr.) on the birds of Banchory, 1859, 142.

*ADAMS (Dr. G. H.) on peat-bogs, 1838, 95; 1839, 78.

ADAMS (Prof. J. C.) on a new calculation of the perturbations of Uranus by the planet Neptune, 1847, 7.

—— on the application of graphical methods to the solution of certain astronomical problems, and in particular to the determination of the perturbations of planets and comets, 1849, 1.

ADAMS (R.) on aneurism by anastomosis, 1835, 99.

*—— on the bones in chronic rheumatism, 1836, 123.

—— on the new circulating channels in double popliteal aneurism, 1836, 123.

ADAMS (W. B.) on railways and their varieties, 1855, 202.

—— on artillery and projectiles, 1855, 203.

—— on a new method of constructing the permanent way and wheels of railways, 1858, 203.

*ADAMSON (C.), exhibited the two sexes of the Psalidognathus Friendii, 1838, 113.

*ADAMSON (Dr.) on the fixing of photographs, 1855, 7.

ADAMSON (Dr. J.) on a case of lactation in an unimpregnated bitch, 1859, 159.

ADDAMS (R.) on a new phenomenon of sonorous interference, 1834, 557.

*—— on the vibration of bells, 1836, 36.

—— on apparatus for solidifying carbonic acid, and on its elastic force, 1838, 70.

ADDISON (Mr.), meteorological observations made at Great Malvern, 1839, 14.

ADDISON (Capt. J.) on coal-pit accidents, 1859, 228.

ADDISON (Dr. W.) on the forces concurring in the phenomena of human life, 1847, 89.

ADIE (A. J.) on the expansion of stone by the application of heat, 1834, 569.

ADIE (P.), description of a new reflecting instrument for angular measurement, 1860, 59.

ADRIAN (Prof.) on the libraries of Germany, 1840, 186.

AGARDH (Prof.) on the originary structure of the flower, 1833, 433.

AGASSIZ (Prof.) on the different species of the genus Salmo, 1834, 617.

—— on the fossil fishes of Scotland, 1834, 646.

—— on fossil fishes, and conclusions to be drawn from the geological distribution of, 1835, 61.

—— on the principles of classification in the animal kingdom, 1835, 67.

—— on glaciers and boulders in Switzerland, 1840, 113.

—— on the development of the fish in the egg, 1840, 129.

—— on animals found in red snow, 1840, 143.

—— on the fishes of the London clay, 1846, 52.

AINSWORTH (W. F.) on a railroad through Asia Minor, 1852, 100.

AIRY (G. B.) on correcting the local magnetic action of the compass in iron steamships, 1838, 21.

—— on a new apparent polarity of light, 1840, 3.

—— on numerous traces of glacier-friction on the north-west side of Bantry Bay, 1843, 62.

—— on the state of the reductions of the planetary and lunar observations made at Greenwich, 1844, 2.

—— on the results of the tide observations on the coast of Ireland, 1844, 4.

AIRY (G. B.) on a question of probabilities which occurs in the use of a fixed collimator for the verification of the constancy of position of an azimuth circle, 1850, 1.
——, remarks on the pivots and construction of the large transit-circle for the Royal observatory at Greenwich, 1850, 169.
—— on the state and history of the question respecting the acceleration of the moon's motion, 1859, 29.
AITKIN (Dr.) on the mechanism by which the blood may be accelerated or retarded, 1834, 681.
*ALCOCK (Mr.) on taste being dependent on nerves from the spheno-palatine ganglion, 1836, 124.
*—— on the anatomy of the fifth pair of nerves, 1836, 124.
*ALCORN (Dr.) on the excess of population, and on emigration as a remedy for it, in the Highlands of Scotland, 1840, 186.
ALDER (JOSHUA) on Eolis, Doris, &c., 1842, 69.
—— on new species of Mollusca nudibranchiata, with observations on the structure and development of the animals of that order, 1843, 73.
—— on a new species of mollusk found at Dalkey Island near Dublin, 1843, 74.
—— on Pterochilus, a new genus of nudibranchiate mollusca, and two new species of Doris, 1844, 66.
—— on a new genus (Dendronotus) of mollusca nudibranchiata, 1845, 65.
—— on new British species of Mollusca nudibranchiata, 1845, 65.
—— on some new and rare British species of naked Mollusca, 1846, 83.
—— on the animal of Lepton squamosum, 1847, 73.
—— on British Mollusca, with descriptions of new species, 1847, 73.
—— on two new species of nudibranchiate Mollusca, and a new genus (Oithona), 1851, 74.
—— on the branchial currents of Pholas and Mya, 1851, 74.
—— on some new genera and species of British zoophytes, 1856, 90.
—— on three new species of Sertularian zoophytes, 1858, 126.
—— on a new zoophyte, and two species of Echinodermata new to Britain, 1859, 142.
ALDRIDGE (Dr.) on the pollen and vegetable impregnation, 1840, 144.
*ALEXANDER (Mr.), electro-magnetic telegraph, 1840, 213.
*ALEXANDER (Col. Sir J.) on the arts of camp life, 1859, 200.
ALEXANDER (Sir J. E.), outline of three expeditions which might be undertaken to explore portions of the interior of Africa, 1840, 121.
ALISON (Dr.) on the vital properties of arteries leading to inflamed parts, 1834, 674.
ALISON (Dr.) on the irritability of muscles in living animals, 1834, 673.
—— on the vital powers in arteries leading to inflamed parts, and on the cause of death in asphyxia, 1835, 89.
*—— on the Scottish system of the management of the poor, 1840, 185.
—— on the destitution and mortality of some of the great towns of Scotland, 1842, 97.
—— on the reports of the Poor-law Commissioners on the state of the poor in Scotland, 1844, 35.
—— on the medical relief to the parochial poor of Scotland under the old poor law, 1846, 97.
*—— on the application of statistics to the investigation and the causes of cholera, 1849, 86.
—— on the system of Croft husbandry and the reclamation of waste lands adopted at Gairloch in Ross-shire, and its results as illustrating the conditions under which the labour of paupers and criminals may be made productive, 1850, 147.
—— on the law of settlement and the removal of paupers in Scotland, 1852, 114.
—— on the application of statistics to questions in medical science, particularly as to the external causes of diseases, 1855, 155.
—— on certain *à priori* principles of biology, 1857, 109.
ALLAN (Mr.), notice of a magnificent specimen of aqua-marine, 1831–32, 86.
ALLAN (A.) on an improved method of maintaining a true liquid level, particularly applicable to wet gas-meters, 1859, 228.
ALLAN (R.) on the condition of the Haukedalr geysers of Iceland, 1855, 75.
ALLEN (Capt. W.) on the probability of the River Tchadda being the outlet of the Lake Tchad, 1838, 99.
——, attempt to account for numerous appearances of sudden and violent drainage seen on the sides of the basin of the Dead Sea, 1852, 95.
—— on a ship-canal to the East Indies through the Dead Sea, 1852, 97.
—— on the antiquities of the island Ruad, the ancient Aradus, and on the ancient harbour of Seleucia in Pieria, 1852, 98.
—— on levels taken in Jerusalem with the aneroid barometer, 1854, 116.
ALLIES (J.) on marine shells found in gravel near Worcester, 1839, 70.
ALLIS (T.) on the sclerotic bones of the eye in birds and reptiles, 1837, 98.
—— on the toes of the African ostrich and other birds, 1838, 107.
—— on the birds of Yorkshire, 1844, 60.
—— on some peculiarities in the flight of birds, 1844, 72.

ALLIS (T.) on the cultivation of ferns, 1844, 73.
*ALLMAN (Prof.), notice of his memoir on numeral evolution, 1831–32, 545.
—— on the mathematical relations of the forms of the cells of plants, 1835, 79.
—— on certain peculiarities in the arteries of the six-banded Armadillo, 1843, 68.
—— on Plumatella repens, 1843, 74.
—— on an annelid from the bogs of the South of Ireland, 1843, 76.
—— on the genus Cirropteron, 1843, 77.
—— on a new genus of terrestrial gasteropod, 1843, 77.
—— on the genera and species of zoophytes inhabiting the fresh waters of Ireland, 1843, 77.
—— on a Linaria gathered in Ireland, 1843, 78.
——, notice of the very rare Trichomanes speciosum, 1843, 78.
—— on a new genus of nudibranchiate Mollusca, 1844, 65.
*—— on a new genus of parasitic Arachnideans, 1844, 65.
—— on the anatomy of Acteon viridis, 1844, 65.
—— on a new genus of helianthoid zoophytes, 1844, 66.
—— on the structure of Lucernariæ, 1844, 66.
——, description of the fruit of some of the Hepaticæ, 1845, 71.
—— on a monstrosity occurring in Saxifraga geum, 1845, 72.
—— on certain peculiarities in the anatomy of Limax Sowerbii, 1846, 82.
—— on the structure of Cristatella mucedo, 1846, 88.
—— on an undescribed Alga allied to Coleochæte scutata, 1846, 89.
—— on the structure of the larva of certain Acari, 1847, 74.
—— on the locomotive larva of Plumatella fruticosa, 1847, 74.
—— on the development of Notodelphys, a new genus of entomostraca, 1847, 74.
—— on a peculiarity in the structure of the stomata of Ceratopteris thalictroides, 1847, 81.
—— on an apparently undescribed genus of freshwater Algæ, 1847, 81.
—— on the nervous system and certain other points in the anatomy of the Bryozoa, 1849, 71.
—— on a new freshwater Bryozoon, 1849, 72.
—— on Lophopus crystallina, 1849, 72.
—— on the reproductive system of Cordylophora lacustris, 1849, 72.
—— on the morphology of the fruit in the Cruciferæ, as illustrated by a monstrosity in the wallflower, 1851, 70.
—— on the development of ferment cells in the warm-water flax steeps, 1852, 64.
ALLMAN (Prof.) on a microscopic Alga as a cause of the phenomenon of the coloration of large masses of water, 1852, 64.
—— on the universality of a medusoid structure in the reproductive gemmæ of the Tubularian and Sertularian polypes, 1852, 70.
—— on a peculiar annelidan larva, 1852, 70.
*—— on the signification of the ovigerous vesicles in the hydroid polypes, 1852, 71.
—— on the structure of the endochrome in Conferva linum, 1853, 62.
—— on the utricular structure of the endochrome, a species of Conferva, 1853, 62.
—— on the structure of Hydra viridis, 1853, 64, 66.
—— on the structure of Bursaria, 1853, 65.
—— on the occurrence in the infusoria of peculiar organs resembling thread-cells, 1854, 105.
—— on the signification of the so-called ova of the Hippocrepian polyzoa, and on the development of the proper embryo in these animals, 1855, 118.
—— on the reproductive organs of Sertularia tamarisca, 1858, 119.
—— on Dicoryne stricta, a new genus and species of the Tubulariadæ, 1859, 142.
—— on a remarkable form of parasitism among the Pycnogonidæ, 1859, 143.
—— on Laomedea tenuis, 1859, 143.
—— on the structure of the Lucernariadæ, 1859, 143.
ALSOP (J.) on the toadstones of Derbyshire, 1844, 51.
ALSTON (Mr.) on the Glasgow asylum for the blind, 1840, 171.
AMEUNEY (A.) on the Arabic-speaking population of the world, 1859, 176.
ANCA (Baron F.) on two newly discovered ossiferous caves in Sicily, 1860, 73.
ANDERSON (Sir C.) on the influence of the invasion of the Danes and Scandinavians, in early times, on certain localities in England, 1853, 73.
ANDERSON (C. J.) on explorations in Africa, 1855, 146.
*ANDERSON (G.) on the superficial deposits laid open by the cuttings on the Inverness and Nairn railroad, 1855, 78.
ANDERSON (J.), abstract of his report on a searching party down the Great Fish River in quest of the crews of the 'Erebus' and 'Terror,' 1857, 148.
ANDERSON (Dr.) on the dew-point, 1840, 40.
—— on the meteorology of Perth, 1840, 56.
ANDERSON (Prof.) on the caustics produced by two mirrors in rotation, 1845, 9.
ANDERSON (Dr. T.) on the action of oxidizing agents on certain organic bases, 1850, 47.
—— on a compound of iodine and codeine, 1850, 48.
—— on the products of the action of heat on animal substances, 1851, 43.

ANDERSON (Dr. T.) on the constitution of meconine and papaverine, and their relations to the other constituents of opium, 1854, 64.
—— on the alkaloids produced during the destructive distillation of animal substances, 1854, 64.
—— on the composition of paraffine from different sources, 1856, 49.
ANDERSON (Rev. Dr.) on the fossil fishes and yellow sandstone of Dura Den, Fifeshire, 1850, 70; 1858, 74; 1859, 97.
—— on human remains in superficial drift, 1859, 95.
ANDREWS (T.) on some caves in Rathlin and adjoining coast of Antrim, 1834, 660.
*ANDREWS (Dr. T.) on the action of nitric acid on certain metals, 1837, 57.
—— on the influence of voltaic combination on chemical action, 1838, 69.
—— on the heat of combination, 1843, 32.
—— on the Irish species of Robertsonian Saxifrages, 1845, 74.
—— on an apparatus for determining the quantity of hygrometric moisture in the air, 1851, 29.
—— on the discovery of minute quantities of soda by the action of polarized light, 1852, 33.
—— on the atomic weights of platinum and barium, 1852, 33.
—— on the microscopic structure of certain basaltic and metamorphic rocks, and the occurrence of metallic iron in them, 1852, 34.
—— on a new variety of magnetic iron ore, with remarks upon the application of bicarbonate of baryta to quantitative analysis, 1852, 41.
—— on a simple instrument for graduating glass tubes, 1853, 37.
—— on the polar decomposition of water by common and atmospheric electricity, 1855, 46.
—— on the allotropic modifications of chlorine and bromine analogous to the ozone from oxygen, 1855, 48.
*—— on the heat of combination of acids and bases, 1857, 44.
*—— on ozone, 1857, 44; 1860, 66.
ANDREWS (W.) on the sea-fisheries of Ireland, with reference to their investigation practically and scientifically, 1857, 101.
ANSTED (Prof.) on mining records, and their preservation, 1844, 42.
—— on working and ventilating the coal-mines of the north of England, with reference to the accidents that occur in such mines from the explosion of firedamp, 1845, 53.
—— on the coal of India, 1846, 63.
APJOHN (Dr. J.) on a formula by which a proper correction for vapour may be applied to the specific gravities obtained by experiments on gases saturated with moisture, 1831–32, 575.
APJOHN (Dr. J.) on the dew-point, 1835, 27.
—— on the specific heats of elastic fluids, 1835, 30.
—— on the specific heats of gases, 1836, 33.
—— on a new chemical compound, 1837, 48.
—— on a new variety of alum, 1837, 49.
—— on the correction to be applied for moisture to the barometric formula, 1843, 20.
—— on a new method of testing the hygrometric formula usually applied to observations made with a wet and dry thermometer, 1843, 36.
*—— on the chemistry of the arsenites, 1843, 37.
—— on the composition and optical properties of a variety of hyalite from Mexico, 1847, 31.
*——, analysis of a substance resembling the pigolite of Prof. Johnston, 1852, 35.
*——, Is the mechanical power capable of being obtained by a given amount of caloric employed in the production of vapour independent of the nature of the liquids?, 1852, 35.
*—— on some compounds of cyanogen, 1857, 44.
*—— on the amount of nitrogen in the Algæ, 1857, 44.
APPOLD (J. G.) on a centrifugal pump, 1849, 110.
—— on a register hygrometer for regulating the atmospheric moisture of houses, 1850, 170.
ARCHER (Prof. T. C.), notice of diagrams of plants for educational purposes, 1854, 96.
—— on some peculiarities discovered in liquid caoutchouc, 1854, 96.
—— on some materials for making paper, 1854, 97.
*ARCHER (Rev. T. C.) on some peculiar circumstances connected with one of the coins used on the west coast of Africa, 1855, 140.
ARGYLL (Duke of) on a fossiliferous deposit underlying basalt in the island of Mull, 1850, 70.
*—— on the occurrence of copper veins in Argyleshire, and on Scotch marble, 1840, 99.
ARMITAGE (W. J.) on a few facts connected with the manufacture of pig iron in the neighbourhood of Leeds, 1858, 204.
ARMSTRONG (Sir W. G.) on the electricity of high-pressure steam, and on a hydro-electric machine, 1843, 39.
—— on a colossal hydro-electric machine, with a notice of some phenomena attending the production of electricity by steam, 1845, 30.
ARNOTT (Dr. N.) on safety lights for mines, 1837, 54.

ARNOTT (Dr. N.) on the regulation of combustion, 1847, 47.
ARNOTT (Dr. G. A. WALKER-) on the Cocculus indicus of commerce, 1834, 597.
—— on the synonyms and affinities of some South African genera of plants, 1840, 147.
*ASHMAN (J.), improved construction of an artificial leg, 1848, 117.
ASHTON (Dr.) on vital statistics, and on the influence which the atmosphere exerts over the rate of mortality, 1842, 97.
ASHWORTH (H.) on the state of education (in 1837) in the borough of Bolton, 1837, 138.
—— on the strike (in 1837) of the cotton spinners of Preston, 1837, 140.
—— on the increase of property in South Lancashire since the revolution, 1842, 94.
—— on the causes and consequences of the Preston strike (in 1853-54), 1854, 130.
ASTON (Capt.) on a singular shower of grain at Rajket, in India, 1840, 44.
ATKINSON (J.) on rain at Harraby near Carlisle, 1841, 30.
—— on sea-sickness, and its prevention, 1851, 75.
ATKINSON (T. W.) on the volcanos of central Asia, commencing with the Baikal in Oriental Siberia, and extending into Mongolia and Chinese Tartary, 1858, 75.
—— on a journey through parts of the Alatou, in Chinese Tartary, 1858, 144.
*—— on the caravan routes from the Russian frontier to Khiva, Bokhara, Kokhan, and Yarkand, 1860, 153.
*—— on the caravan route from Yarkand to Mai-matchin, 1860, 154.
*AUSTIN (R.), report of an expedition to explore the interior of Western Australia, 1856, 105.
*AYTON (Lieut.) on gold in India, 1856, 60.
AYTOUN (R.) on a safety cage for miners, 1859, 228.

BABBAGE (C.) on the advantage which would be derived from a collection in tables of all those facts which can be expressed by numbers in the various sciences and arts, 1831-32, 613.
—— on natural chronometry, 1835, 6.
—— on a remarkable phenomenon in the sea, 1835, 6.
—— on the statistics contained in the Ordnance Survey of Templemore, 1835, 118.
*—— on cooperative shops, 1835, 125.
—— on a thermometer discovered in Italy, 1836, 77.
——, method by which engravings on wood may be rendered useful for the illustration of machinery, 1838, 154.
BABBAGE (H. P.) on mechanical notation, as exemplified in the Swedish calculating machine of Messrs. Scheütz, 1855, 203.
BABINET (M.) on a new photometer, 1854, 2.
BABINGTON (Prof. C. C.), short account of the flora of Guernsey, Jersey, and Herm, 1837, 103.
—— on the botany of the Channel Islands, 1838, 117.
—— on additions to the British flora, 1839, 92; 1844, 72; 1848, 84.
—— on the Cuscuta epilinum, or flax dodder, 1840, 148.
——, additions to the flora of Cork, 1843, 79.
*—— on Anacharis alsinastrum, 1850, 112.
—— on a supposed fossil Fucus found at Aust Cliff, Gloucestershire, 1856, 83.
*BACCHETTI (Dr.) on a case of extra-uterine pregnancy, 1844, 85.
BACHE (Prof.), researches on radiation, notice of, 1837, 20.
—— on the effect of deflected currents of air on the quantity of rain collected by a rain-gauge, 1838, 25.
*——, map of the coast survey of the United States, 1847, 39.
BACKHOUSE (E.) on the annual appearance on the Durham coast of some of the Lestris tribe, 1838, 108.
BADDELEY (Capt.) on the geology and mineralogy of Canada, 1840, 114.
BAER (Prof.) on the frozen soil of Siberia, 1838, 96.
——, sketch of the Russian expeditions to Novaïa Zemlïa, 1838, 96.
BAIKIE (Dr. W. B.) on the expedition up the Niger and Tchadda rivers, 1855, 146.
BAILY (F.), account of some MS. letters relative to Flamsteed's *Historia Cœlestis*, 1833, 462.
BAILY (W. H.) on the occurrence of a true cretaceous formation in the south of Africa, 1854, 83.
—— on fossils from the Crimea, 1856, 60.
—— on carboniferous limestone fossils from the county of Limerick, 1857, 62.
—— on a new fossil fern from the coal-measures near Glyn, co. Limerick, 1857, 63.
—— on the fructification of Cyclopteris hibernica, from the upper Devonian or lower Carboniferous strata at Kiltorkan Hill, Kilkenny, 1858, 75.
—— on two new species of crustacea (Bellinurus) from the coal-measures in Queen's County, Ireland, and remarks on forms allied to them, 1858, 76.
—— on tertiary fossils of India, 1859, 97.
—— on Sphenopteris Hookeri, a new fossil fern from the upper old red sandstone formation at Kiltorkan Hill, in co. of Kilkenny, and on the fish-remains and other associated fossils, 1859, 98.
*BAIN (A.) on electric clocks, 1847, 23.
*BAIN (D.) on harbours of refuge, 1859, 229.
BAINES (E.), address as President of the Statistical Section, 1858, 157.
—— on the woollen manufacture of Eng-

land, with special reference to the Leeds clothing district, 1858, 158.
BAINES (W.) on the Yorkshire flagstones and their fossils, 1858, 78.
BAINES (Mr.), notice of a bunch of grapes having black and white grapes on the same bunch, 1858, 115.
*BAIRD (Mr.) on a successful excision of the elbow-joint, 1839, 130.
BAIRD (Dr.) on the genera Nebalia, Chirocephalus, and Branchipus, 1847, 74.
BAKER (J. G.), an attempt to classify the flowering plants and ferns of Great Britain according to their geognostic relations, 1855, 99.
——, discovery of Galium montanum and G. commutatum in Yorkshire, 1855, 100.
BAKER (R.) on the sanitary and industrial economy of the borough of Leeds, 1858, 164.
BAKER (R., jun.) on the hæmatite ores of West Cumberland, 1858, 106.
BAKER (T. B. LLOYD) on the reformation of offenders, 1854, 132.
——, statistics and suggestions connected with the reformatien of juvenile offenders, 1856, 128.
BAKEWELL (F. C.) on the copying telegraph, and other improvements in telegraphic communication, 1849, 110.
—— on the conduction of electricity through water, 1851, 6.
—— on the copying electric telegraph, 1851, 11.
—— on telegraphic communications by land and sea, 1852, 121.
—— on telegraphic communication between England and America, 1854, 147.
BALD (R.) on the Mushet band, commonly called the black-band ironstone of the coal-field of Scotland, 1846, 62.
BALD (W.) on the tides in the harbour of Glasgow, and the velocity of the tidal wave in the estuary of the river Clyde, 1840, 49.
—— on the construction of the models of the island of Achil, Clare Island, and the south-western district of Mayo, in Ireland, 1840, 126.
*BALESTRINI (A.) on the submarine electric telegraph cable, 1857, 189.
BALFOUR (E.) on the migratory tribes of central India, 1845, 78.
—— on the means of maintaining the health of troops in India, 1848, 101.
BALFOUR (Prof.) on the flora of the south and west of Ireland, 1852, 64.
——, exhibition of British lichens, containing dyeing lichens, 1853, 37.
*—— on some new plants, 1853, 63.
—— on the occurrence in coal of peculiar vegetable organisms resembling the sporangia of Lycopodium, 1854, 97.
——, notice of a series of specimens illustrating the distribution of plants in Great Britain, and remarks on the flora of Scotland, 1855, 100.
BALL (Mr.), notice of Cuculus glandarius captured in the co. of Galway, 1843, 71.
—— on the peculiar structure of the hoof of the giraffe, 1844, 63.
*BALL (C.) on the meaning of the arithmetical symbols for zero and unity in general symbolical algebra, 1838, 2.
BALL (J.), Erica Mackaiana, exhibited by, 1837, 104.
—— on practical means for the advancement of systematic botany, 1845, 72.
—— on the specific characters of plants, considered in morphological connexion, 1845, 74.
BALL (JOHN) on rendering the electric telegraph subservient to meteorological research, 1848, 12.
—— on a plan for systematic observations of temperature in mountain countries, 1860, 37.
BALL (Dr. R.) on Pentacrinus europæus and a species of Beroë, 1835, 72.
*——, notice of crania of Seals from the coast of Ireland, 1836, 98.
—— on the destruction of plants by animal odour, 1841, 76.
—— on noises produced by one of the Notonectidæ, 1845, 64.
*—— on Bryarea scolopendra found in Dublin Bay by Dr. Corrigan, 1849, 72.
*——, notice of a new dredge for natural-history purposes, 1849, 72.
—— on a plan of aërating aquavivaria, 1854, 115.
*——, notice of a dredge, 1856, 91.
—— resolution adopted as a tribute of respect to his memory, 1857, 95.
*BALTEN (A.) on a boat-lowering apparatus, 1859, 229.
BANKS (Dr.) on a new anemometer, 1846, 12.
BANKS (R.) on the discovery of ichthyolites and crustacea in the tilestones of Kington, Herefordshire, 1855, 78.
*BANNESTER (S.) on the population of New Zealand, 1838, 167.
—— on the population of Africa, 1840, 185.
BARDSLEY (Dr.) on a case of monstrosity, 1842, 87.
BARKER (Prof. F.), account of some chemical processes, 1835, 52.
*BARKER (Dr. J.) on the part played by the cavernous sinus in the circulation of the brain, 1852, 78.
*BARKER (JOHN), mechanical proof of the composition of rotatory forces, 1852, 122.
BARKER (Dr. W.) on electric currents passing through platinum wire, 1835, 33.
BARKLAY (R.) on an instrument for sounding, 1855, 205.
BARLEE (G.), rare mollusca collected in Zetland by, 1849, 78.
——, list of marine Polyzoa collected in Shetland and the Orkneys, with descrip-

tions of the new species by G. Busk, 1859, 144.
*Barlow (P. W.) on the mechanical effects of combining suspension chains and girders, 1860, 201.
Barnes (Dr. R.) on the condition of Thames water, as affected by London sewage, 1857, 44.
Barnes (Dr. T.) on abscess of the lungs, 1838, 134.
Barnett (Mr.) on photographic researches, 1855, 48.
Barrett (Lucas) on the Brachiopoda observed in a dredging tour with Mr. M'Andrew on the coast of Norway, 1855, 106.
—— on the atlas and axis of the Plesiosaurus, 1858, 78.
Barry (Dr. M.) on the colour of the sky as seen from Mont Blanc, 1835, 77.
—— on the first changes consequent on fecundation in the mammiferous ovum, with reference to Prof. Agassiz's communication on the development of the fish in the egg, 1840, 129.
—— on a singular locality chosen for its nest by the black redstart, 1852, 71.
Barth (Dr. H.), description of Timbuctoo, its population and commerce, 1855, 140.
*—— on the anomalous period of the rising of the Niger, 1857, 118.
Bartholomew (W. H.) on steam-tugs employed on the Aire and Calder navigation, 1858, 205.
Bartlett (Mr.) on the post-tertiary formations of Cornwall and Devon, 1841, 61.
—— on animal and vegetable physiology, 1841, 77.
Barton (J.) on the permanent way of railways, 1852, 122.
—— on the calculation of strains in lattice girders, 1852, 123.
—— on a model of the Boyne viaduct, with description of it, and the principles of its construction, 1857, 178.
Bashforth (Rev. F.) on a machine for finding the numerical roots of equations, and tracing a variety of useful curves, 1845, 3.
Bate (C. Spence) on fossil remains discovered in Bacon Hole, Gower, and other remains from beneath the bed of the river Tawey, 1848, 62.
—— on some Tubicolæ, 1849, 72.
—— on the boring of marine animals, 1849, 73.
—— on Crustacea, 1850, 115:—development of the shell, 115; shedding the exuviæ, 116; reproduction of limbs, 116; use of the false feet in male Brachyura, 116; number of broods, 117; uses of the fifth pair of legs in the Anomoura, 117; new species, 118.
*—— on the morphology of the Pycnogonidæ, and on the development of the ova in isopodous and amphipodous crustacea, 1853, 66.
*Bate (C. Spence) notice of a new crustacean, Monimia Whiteana, 1856, 91.
*Bateman (Dr.), astronomical instruments in the Great Exhibition (1851), 1851, 21.
Bateman (J.) on the sliding rule, 1841, 42.
Bateman (John) on the collection of water for the supply of towns, 1844, 100.
Bateman (Dr. Joseph) on Mr. Phillips's method of discovering adulteration in tobacco, 1844, 29.
*—— on the rate of mortality in the metropolitan improved dwellings for the industrial classes, 1858, 164.
—— on the degree of education of persons tried at the Middlesex Sessions, 1858, 168.
—— on the investments of the industrial classes, 1858, 168.
Bateman (J. F.) on a self-acting waste-weir and scouring sluice, 1842, 110.
——, observations on the discharge of water, 1852, 124.
*—— on the large valves and other machinery employed for the discharge of water at the Manchester waterworks, 1853, 113.
*——, description of the Glasgow waterworks, 1859, 230.
—— on an artesian well in the new red sandstone at the Wolverhampton waterworks, 1859, 229.
—— on the Glasgow waterworks, 1859, 230.
*Bateson (S.) on Glynn and Appel's patent paper for the prevention of piracy and forgery by the anastatic process, 1852, 35.
Batten (E.) on the explanation of certain geological phenomena by the agency of glaciers, 1844, 57.
Baxter (W.) on the spiral vessels observed in the mucous matter which envelopes the seeds of Salvia verbenaca, 1831–32, 605.
Bayley (G.) on a floating dry dock, 1858, 206.
Bazley (T.), trade and commerce the auxiliaries of civilization and comfort, 1858, 169.
*Beale (Prof.) on the ultimate arrangement of nerves in muscular tissue, 1860, 125.
Beamish (Major N. L.) on the apparent fall or diminution of water in the Baltic, and elevation of the Scandinavian coast, 1843, 59.
——, statistical report of the parish of St. Michael, 1843, 87.
Beamish (R.), description by R. Mushet of an ancient miner's axe, discovered in the Forest of Dean, 1856, 71.
——, statistics of Cheltenham, 1856, 129.
——, the human hand an index of mental development, 1857, 118.
Beart (Mr.) on a method of filtering liquids, 1839, 131.
Beattie (G.) on an improved door spring, 1850, 170.
*Beattie (J. S.) on electro-magnetic engines, 1857, 178; on coal-burning engines, 178.

BEATTIE (W.) on a bone-cave near Montrose, 1859, 99.
BEAUFORT (Capt.), letter from Capt. Hewett on the rise and fall of tide in the middle of the North Sea, 1841, 32.
*BEAUMONT (G. B.) on the origin and institutions of the Cymri, 1851, 84.
BECK (J.) on producing the idea of distance in the stereoscope, 1859, 61.
BECKER (Dr. L.) on the constant increase of elevation of the beds of rivers, 1850, 72.
——, remarks as to the earlier existence of the Binnen or inland lake, 1850, 73.
BECKETT (C.) on the dialects north and south of the Humber, 1853, 73.
BECKLEY'S (R.) self-registering anemometer, description of, by J. Welsh, 1856, 38.
BECQUEREL (E.) on a pile with sulphate of lead, 1860, 59.
BEDDOE (Dr. J.) on the physical characters of the ancient and modern Germans, 1857, 118.
BEDFORD (J.) on colorific lichens, 1858, 45.
BEECHEY (Capt.), results of deep dredging off the Mull of Galloway, 1842, 72.
BEKE (Dr. C. T.) on the physical character of the table-land of Abessinia, 1846, 70.
—— on the origin of the Gallas, 1847, 113.
—— on the sources of the Nile in the Mountains of the Moon, 1848, 63.
—— on the geographical distribution of the languages of Abessinia and the neighbouring countries, 1848, 94.
—— on a diamond slab supposed to have been cut from the Koh-i-noor, 1851, 44.
——, a summary of recent Nilotic discovery, 1851, 84.
BELCHER (Capt. Sir E.) on the discovery of Ichthyosaurus and other fossils in the Arctic searching expedition, 1855, 79.
——, remarks on the trunk of a tree discovered erect as it grew within the Arctic circle, 1855, 101.
—— on the Arctic expedition, 1855, 147.
—— on the manufacture of stone hatchets, &c. by the Esquimaux, 1860, 154.
*BELL (A.) on a new case of interference, 1840, 14.
BELL (Sir C.) on the proper method of studying the nervous system, 1834, 667.
BELL (Dr. C. W.) on the disease Mal d'Aleppe, 1840, 161.
BELL (Prof. T.) on the crustacea found by Prof. E. Forbes and Mr. M'Andrew in their cruises round the coast, 1846, 80.
BELLAMY (J. C.), notice of a collection of Devonian fossils, 1841, 64.
—— on the distribution, &c. of the mammals of Devonshire, 1841, 68.
BELLAMY (Dr. P. F.) on two Peruvian mummies, 1841, 75.
BELLINGHAM (Dr.) on Trichocephalus dispar in the intestines of man, 1837, 98.
—— on the motions of the heart, 1837, 114.
BELLINGHAM (Dr.) on Ascaris alata, 1838, 115.
—— on the occurrence of crystals in the human intestines, 1838, 134.
*—— on new species of Entozoa, 1839, 86.
*BENGE (Mr.), new secret lock without a key, 1839, 131.
*BENNET (Dr. H.) on a peculiar form of ulceration of the cervix uteri, 1846, 94.
BENNETT (Dr. G.) on some uses to which the nuts of the vegetable ivory palm (Phytelephas macrocarpa) are applied, 1859, 130.
*BENNETT (Prof. G.) on the structure of the nerve-tubes, 1859, 265.
*—— on the origin of morbid growths with reference to the connective-tissue theory, 1859, 265.
*—— on the molecular theory of organization, 1859, 265.
BENNETT (Prof. J. H.) on the law of molecular elaboration in organized bodies, 1855, 119.
BENNOCH (F.), some suggestions for an improved system of currency and banking, 1853, 97.
BENSON (Mr.) on the theory of the formation of white lead, 1839, 60.
BENSON (STARLING) on a boulder of cannel coal found in a vein of common bituminous coal, 1848, 64.
—— on the relative position of the various qualities of coal in the South Wales coal-measures, 1848, 65.
*BENTHAM (Lady) on an improved mode of keeping accounts in our national establishments, 1855, 159.
*—— on continuous work in dockyards, 1855, 205.
BENTLEY (J.) on the state of education and crime in England and Wales, 1840, 185.
BERGERON (M.), method of instantaneously casting loose the locomotive engine from steam-carriages, 1842, 114.
BERKELEY (Rev. M. J.) on the probability of the conversion of asci into spores in certain fungi, 1851, 70.
BERNARD (Dr. F.) on indices of the refraction of transparent media included between two parallel faces, and on a portable refractometer, 1854, 2.
—— description of a photometer, 1854, 4.
—— on polarimetry, 1854, 4.
BERRY (G. R.) on collodion negatives, 1854, 64.
BESSEL (M.) on the astronomical clock, 1842, 1.
——, notice of a very curious fact connected with photography, discovered by M. Möser, 1842, 14.
*BESSEMER (M.) on the manufacture of iron and steel, 1856, 162.
BESWICK (S.) on a method for computing magnetic charts of declination, 1850, 3.
BEVAN (B.) on the compilation of a general

table of altitudes of places in Great Britain and Ireland, 1831–32, 581.
Bevan (Dr.) on the tests for arsenic, 1843, 87.
Bevan (Mr.), notice of a paddle-wheel, 1843, 101.
*Bevan (Dr.), a new life-boat, 1844, 99.
*—— on applying atmospheric air to propulsion, 1846, 113.
Bevan (G. P.) on the marine shell-bed of the South Wales coal basin, showing the presence of vegetable remains in the upper coal-measures, and of shells and fish in the lower coal-measures, 1858, 80.
*Biallobłotzki (Dr.) on an ethnological collection in illustration of the ethnology of Java, 1852, 82.
*—— on the different points of fusion to be observed in the constituents of granite, 1859, 68.
*—— on granite, 1859, 100.
Bianconi (C.) on his car establishment in Ireland, 1843, 92; 1857, 155.
Bickerstetth (Mr.) on the milk of Galactodendron utile, 1837, 102.
Bielke (R.), statistical remarks relating to Denmark, 1847, 96.
*Biggs (Mr.), inquiry into the sanitary condition of co. Cork, 1843, 93.
Billet (J.) on the vital principle, 1847, 91.
*Billings (R. M.) on the mechanical principles of ancient tracery, 1855, 205.
Bingley (C. W.) on the peculiar action of mud and water on glass, 1858, 45.
Binney (E. W.) on microscopic vegetable skeletons found in peat near Gainsborough, 1839, 71.
*—— on fossil fishes from St. George's Colliery near Manchester, 1839, 75.
—— on the great Lancashire coal-field, 1842, 49.
—— on fossil trees at St. Helen's, Lancashire, which exhibit Stigmariæ as their roots, 1845, 52.
*—— on the solubility of bone-earth from various sources in solutions of chloride of ammonium and common salt, 1859, 66.
Birchall (E.) on a list of additions to Irish Lepidoptera, 1857, 101.
Bird (Dr. G.) on the crystallization of metals by voltaic action, 1837, 45.
—— on some of the products obtained by the action of nitric acid on alcohol, 1838, 55.
—— on the artificial formation of a basic chloride of copper by voltaic influence, 1838, 56.
—— on the deposition of metallic copper from its solutions, 1838, 57.
—— on poisoning by the vapours of burning charcoal, 1839, 101.
*Bird (Dr.) on the deodorization of sewage, 1860, 66.
Birmingham (T.) on reclaiming the bog of Critt, in Galway, 1837, 139.
Birmingham (T.) on the advantages to be obtained by turning canals into railways, especially as applicable to the Royal Canal lying between the city of Dublin and the river Shannon, 1844, 97.
—— on the drift of West Galway and the eastern part of Mayo, 1857, 64.
Birt (W. R.) on the probable causes of the aërial currents of the temperate zones, 1837, 34.
—— on atmospheric waves, 1846, 35.
—— on shooting stars, 1849, 15.
—— on the mid-day illumination of the lunar craters, Geminus, Burckhardt, and Bernoulli, 1859, 30.
—— on the forms of certain lunar craters indicative of the operation of a peculiar degrading force, 1860, 34.
—— on atmospheric waves, 1860, 38.
Black (Dr.) on the epidemic influenza at Bolton-le-Moors, 1837, 115.
—— on certain traces of Roman colonization in Lancashire, 1845, 80.
Black (the late Dr.), a few unpublished particulars concerning, by Dr. G. Wilson, 1850, 69.
*Black (Dr.) on coal at Ambisheg, Isle of Bute, 1859, 100.
Black (W.) on ascertaining the strength of spirits, 1836, 61.
—— on the influence of electricity on the process of brewing, 1837, 58.
Blackburn (C.) on some new properties of geometric series, 1837, 2.
*—— on analytic theorems, 1839, 26.
Blackie (Dr. W. G.) on the Russo-Chinese frontier and the Amoor River, 1858, 147.
Blackwall (J.) on the structure and functions of spiders, 1833, 444.
*——, summer birds observed in Denbighshire, 1842, 66.
—— on the palpi of spiders, 1842, 66.
—— on a species of Ichneumon whose larva is parasitic on spiders, 1842, 68.
——, periodical birds observed near Llanrwst, 1843, 69; 1845, 61, 63; 1846, 79; 1847, 75; 1848, 84.
——, work on British spiders, notice of, 1860, 120.
Blackwall (T. E.) on the production of crystals of silver, 1838, 74.
Blair (Dr.) on some remarkable primitive monuments existing at or near Carnac (Brittany), and on the discrimination of races by their local and fixed monuments, 1849, 82.
Blake (Dr. J.) on the action of substances injected into the veins, 1838, 129.
—— on the connexion between the isomorphous relations of the elements and their physiological action, 1846, 40.
—— on the physiological action of inorganic substances introduced directly into the blood, 1853, 66.
Blake (Dr. J.) on the comparative richness

of auriferous quartz extracted at different depths from the same lode, 1853, 50.
BLAKELY (Capt.) on the proportion between the length required for an electric telegraph cable and its specific gravity, 1857, 11.
—— on improvements in ordnance, 1857, 179.
—— on rifled cannon, 1860, 201.
BLAKISTON (Dr.) on respiratory sounds, and on the voice, 1839, 99.
BLANCKLY (Capt.), two Peruvian mummies presented to the Devon and Cornwall Natural History Society by, 1841, 75.
BLAND (Hon. W.) on an atmotic ship, 1860, 60.
*BLECH (Dr.) on South African languages, 1854, 126.
*BLEEKER (Dr.), descriptions of genera of fish from Java, 1859, 144.
BLUNDELL (Dr. J. W. F.) on an Australian expedition, 1854, 125.
BLUNT (H.) on a model of the moon's surface, 1849, 1.
*BLYTH (W.) on the manufacture of sulphuric acid, 1842, 40.
BLYTH (Prof.) on the cleavage of the Devonians of the south of Ireland, 1855, 82.
*BODE (Baron de) on the country to the west of the Caspian Sea, 1859, 177.
*BODMER (J. C.) on the new double-piston steam-engine, 1844, 98.
—— on a new apparatus for starting heavy machinery, 1844, 98.
—— on a new furnace grate, 1844, 98.
*——, improved cutting tools, 1844, 99.
—— on long- and short-stroked steam-engines, 1846, 113.
*BOGUSLAWSKI's (Prof.) report on the magnetic observations made at Breslau with the magnetic instruments belonging to the Association, General Sabine's notice of, 1842, 19.
—— on a stand applicable to the use of astronomical telescopes, 1845, 6.
—— on the formation of coal, &c., by Dr. Göpping, 1847, 66.
BOILEAU (Sir J. P.) on the state of the agricultural labourers in the county of Norfolk, 1845, 89.
——, statistics of mendicancy, 1848, 105.
BOIS-REYMOND (Dr. E. DU) on a new effect produced on muscles by the electric current, 1852, 78.
BOLLAERT (G. A.) on the meteoric iron of Atacama, 1851, 84.
BOLLAERT (W.) on the Comanche Indians, 1846, 116.
—— on the Indian tribes of Texas, 1846, 116.
*—— on certain tribes of South America, 1851, 84.
——, observations on the great earthquake experienced in Chile, 1851, 85.
*—— on the sources of common salt, 1852, 41.
BOLLAERT (W.) on the distribution of common salt, and other saline bodies, with a view to show their primary origin and subsequent formations, 1852, 100.
——, ethnological and antiquarian researches in New Granada, Quito, and Peru, and on the pre-incareal, incareal, and the monuments of neighbouring nations in Peru, 1857, 121.
*—— on the geography of Southern Peru, 1859, 177.
BOND (G. P. and R. F.) on an apparatus for making astronomical observations by means of electro-magnetism, 1851, 21.
BOND (W. C.), notice of curves representing the changes of magnetic declination observed by, 1841, 27.
BONOMI (J.) on a gigantic bird sculptured on the tomb of an officer of the household of Pharaoh, 1845, 63.
—— on an apparatus for measuring and registering two dimensions of the human frame, 1845, 76.
—— on the figures of birds observed on a tomb at Memphis, 1846, 79.
—— on a map of ancient Egypt of the time of Antoninus Pius, 1848, 66.
BONTEMPS (G.) on some modifications in the colouring of glass by metallic oxides, 1849, 34.
BOOLE (Prof. G.) on the equation of Laplace's functions, 1845, 2.
*—— on a method of definite integration, 1847, 1.
—— on the theory of astronomical observations, 1857, 2.
*—— on certain additions to the integral calculus, 1857, 2.
*BOOTH (A.) on spontaneous combustion, 1841, 50.
*—— on some fires produced from spontaneous combustion, 1842, 40.
*—— on fires at Liverpool, and on spontaneous combustion, 1843, 39.
*—— on the chemical composition of smoke, its production, and influence on organic substances, 1843, 39.
BOOTH (Mr.) on an apparatus for raising miners and minerals from deep mines, 1843, 100.
BOOTH (Rev. Dr. J.) on a new method of converting rectilinear into rotatory motion, 1845, 94.
—— on a general method of deriving the properties of umbilical surfaces of the second order, having three unequal axes, from the properties of the sphere, 1858, 2.
—— on the mutual relations of inverse curves and inverse curved surfaces, 1858, 3.
—— on an instrument for describing spirals, 1858, 207.
—— on the relations between hyperconic sections and elliptic integrals, 1860, 4.
*—— on a new general method for establishing the theory of conic sections, 1860, 4.

Booth (Rev. Dr. J.) on an improved instrument for describing spirals, 1860, 60.
*—— on the true principles of an income-tax, 1860, 184.
—— on a deep-sea pressure-gauge, invented by Mr. H. Johnson, 1860, 202.
*Borchardt (M.) sur le principe du dernier multiplicateur dans les problèmes de mécanique, 1847, 1.
Bose (C. M. von), remarks on the volume theory of gases, 1860, 71.
*Boswarra (J.), notice of the heave of a copper lode, 1841, 64.
Bothwell (G. B.) on the manufactures and trade of Aberdeen, 1859, 200.
*Boult (J.), diagrams illustrative of the changes in the bed of the river Mersey and its approaches, 1854, 117.
*—— on the importance of periodical engineering surveys of tidal harbours, 1855, 147.
Boutigny (M.) on the spheroidal state of bodies, and its application to steam-boilers, and on the freezing of water in red-hot vessels, 1845, 27.
—— on the cause which maintains bodies in the spheroidal state beyond the sphere of physico-chemical activity, 1851, 44.
Bowditch (W. R.) on the formation of hail, as illustrated by local storms, 1858, 34.
Bowerbank (Dr. J. S.) on the probable dimensions of the great shark (Carcharias megalodon) of the red crag, 1851, 54.
—— on the pterodactyles of the chalk formation, 1851, 55.
—— on the remains of a gigantic bird from the London clay of Sheppey, 1851, 55.
—— on the origin of siliceous deposits in the chalk formation, 1856, 63.
Bowman (Mr.) on a remarkable rainbow, 1840, 12.
Bowman (E.) on determining distances by the telescope, 1841, 42.
Bowman (J. E.) on the bone-cave at Cefn in Denbighshire, 1836, 88.
—— on the longevity of the yew, and the antiquity of planting it in churchyards, 1836, 101.
—— on microscopic vegetable skeletons found by Mr. Binney in the peat near Gainsborough, 1839, 71.
—— on a species of dodder (Cuscuta epilinum), 1839, 89.
—— on the upper Silurian formation in the Vale of Llangollen, and on a plateau of igneous rocks on the east flank of the Berwyn range, 1840, 100.
—— on the upper Silurian rocks of Denbighshire, 1841, 59.
Bowman (W.) on some points in the anatomy of the eye, chiefly with reference to its power of adjustment, 1847, 91.
Bowness (E.) on a plan for drawing coals from pits without ropes or chains, 1844, 98.
Bowring (Dr.) on plague and quarantine, 1838, 120.
Bowring (J. C.) on the theory and practice of amalgamation of silver ores in Mexico and Peru, 1844, 28.
*Boys (Rev. Mr.) on the choice of sites for colonial towns, 1845, 90.
Bracebridge (C. H.) on rural statistics, illustrated by those of the Atherstone Union, 1844, 93.
—— on the county of Warwick asylum for juvenile offenders, 1849, 87.
—— on self-supporting dispensaries, with statistics of the Coventry Provident Dispensary, 1858, 170.
*Bradley (Rev. J.) on the boring of Sabellæ, 1848, 125.
Brady (A.) on the elephant-remains at Ilford, 1859, 130.
*Braham (Mr.) on an improvement in Pope's fluid compass, 1836, 132.
Braid (J.) on the physiology of fascination, 1855, 120.
Brakenridge (J.) on the working and ventilation of coal-mines, 1857, 180.
Brand (Mr.) on the statistics of British botany, 1839, 89.
*Brand (Mr. Consul) on the Portuguese possessions of South-west Africa, 1855, 147.
Brandt (J. F.), notice of his zoological investigations, 1840, 137.
Braschmann (Prof.), considerations on the principles of analytical mechanics, 1842, 4.
Brazier (J. S.) on Irish bog butter, 1852, 35.
—— on the action of concentrated sulphuric acid on cubebin in relation to the test for strychnine by bichromate of potash and sulphuric acid, 1859, 256.
—— on dugong oil, 1859, 256.
*—— on distilled water, 1859, 256.
——, laboratory memoranda, 1859, 257.
Brennecke (Dr.) on some solutions of the problem of tactions of Apollonius of Perga by modern geometry, 1860, 4.
Brent (J. B.), a comparison of athletic men of Great Britain with Greek statues, 1851, 84.
Brent (W. B.) on the stature and relative proportions of man at different epochs and in different countries, 1844, 82.
—— on the height, weight, and strength of man, 1845, 80.
Brett (R. H.) on the physical and chemical characters of expectoration in different diseases of the lungs, 1837, 125.
Brett (J. W.) on the origin of the submarine telegraph, and its extension to India and America, 1854, 7.
Breunner (Count) on the use of wire ropes in deep mines, 1838, 150.
Brewster (Sir D.) on the progress of the science of mineralogy, 1831–32, 60.
—— on an instrument for distinguishing precious stones and minerals, 1831–32, 72.
—— on the crystalline lens in fishes, birds, reptiles, and quadrupeds, 1831–32, 81.

BREWSTER (Sir D.) on the analysis of solar light, 1831–32, 89.
—— on the colours of natural bodies, 1831–32, 547.
—— on the undulations excited in the retina by the action of luminous points and lines, 1831–32, 549.
—— on the effect of compression and dilatation upon the retina, 1831–32, 553.
—— on a remarkable specimen of amber, 1834, 574.
—— on the value of optical characters in the discrimination of mineral species, 1834, 575.
—— on the action of crystallized surfaces upon common and polarized light, 1836, 13.
—— on the polarizing structure in the crystalline lens after death, 1836, 16.
—— on cataract, 1836, 111.
—— on the cause of the optical phenomena in the crystalline lens during the absorption of distilled water, 1837, 11.
—— on a new property of light, 1837, 12.
—— on a new structure in the diamond, 1837, 13.
—— on an ocular parallax in vision, and on the law of visible direction, 1838, 7.
—— on new phenomena of colour in certain specimens of fluor spar, 1838, 10.
—— on new phenomena of diffraction, 1838, 12.
—— on the combined action of grooved metallic and transparent surfaces upon light, 1838, 13.
—— on a new kind of polarity in homogeneous light, 1838, 13.
—— on some preparations of the eye by Mr. C. Wallace, 1838, 14.
—— on the fossil teeth of the Sauroid fishes, 1838, 90.
——, optical phenomena observed by, Rev. Prof. Powell's explanation of, 1839, 1.
—— on the decomposition of glass, 1840, 5.
—— on Prof. Powell's measures of the indices of refraction for the lines G and H in the spectrum, 1840, 5.
—— on the wings of polarized light produced in specimens of decomposed glass, 1840, 6.
—— on the cause of the increase of colour by the inversion of the head, 1840, 7.
—— on the phenomena and cause of muscæ volitantes, 1840, 8.
—— on a method of illuminating microscopic objects, 1840, 9.
——, account of the camera obscura, and other apparatus used in making daguerreotype drawings, 1840, 9.
—— on the line of visible direction along the axis of vision, 1840, 9.
—— on an improvement in the polarizing microscope, 1840, 10.
—— on the blue, &c. colour of the sun, 1840, 10.
—— on a new property of the rays of the spectrum, with observations on the explanation of it given by the Astronomer Royal, on the principles of the undulatory theory, 1842, 12.
BREWSTER (Sir D.) on the existence of a new neutral point, and two secondary neutral points, 1842, 13.
—— on crystalline reflexion, 1842, 13.
—— on the dichroism of the palladio-chlorides of potassium and ammonium, 1842, 13.
——, account of Dr. Möser's new process of producing photographic impressions, 1842, 14.
—— on the dichroism of a solution of stramonium in æther, 1842, 14.
—— on the geometric forms, and laws of illumination of the spaces which receive the solar rays, transmitted through quadrangular apertures, 1842, 15.
—— on luminous lines in certain flames corresponding to the defective lines in the sun's light, 1842, 15.
—— on the structure of a part of the solar spectrum hitherto unexamined, 1842, 15.
—— on the luminous bands in the spectra of various flames, 1842, 15.
——, experiment on the ordinary refraction of Iceland spar, 1843, 7.
—— on the action of two blue oils upon light, 1843, 8.
—— on the cause of an optical phenomenon observed by the Rev. W. Selwyn, 1844, 8.
—— on the cause of the colours in precious opal, 1844, 9.
—— on the cause of the white rings seen round a luminous body when looked at through calcareous spar, 1844, 9.
—— on crystals in the cavities of topaz, which are dissolved by heat and recrystallize on cooling, 1844, 9.
—— on a singular effect of the juxtaposition of certain colours under particular circumstances, 1844, 10.
—— on the accommodation of the eye to various distances, 1844, 10.
—— on the polarization of light by rough surfaces, and white dispersing surfaces, 1844, 11.
—— on a new polarity of light, with an examination of Mr. Airy's explanation of it on the undulatory theory, 1845, 7.
—— on two new properties of the retina, 1845, 8.
—— on the rotation of minute crystals in the cavities of topaz, 1845, 9.
—— on the condition of topaz subsequent to the formation of certain classes of cavities within it, 1845, 9.
—— on an improved method of taking positive Talbotypes (calotypes), 1845, 10.
—— on fog-rings observed in America, 1845, 19.
—— on a new property of light exhibited in the action of chrysammate of potash upon common and polarized light, 1846, 7.

BREWSTER (Sir D.) on the polarization of the atmosphere, 1847, 32.
—— on a new species of polarization related to the direction of the grooves in grooved surfaces, 1847, 32.
—— on the conversion of relief in a drawing, by inverting the drawing and viewing it with a lens of a short focus, 1847, 33.
—— on the diffraction bands produced by the edges of thin plates, whether solid or fluid, 1847, 33.
—— on the dark lines in the portion of the red space beyond the red extremity of the spectrum as seen by Fraunhofer, 1847, 33.
—— on the functions of the membranes of the eye at the foramen centrale of Soemmering, 1847, 33.
—— on the compensation of impressions moving over the retina, as seen in railway travelling, 1848, 47.
—— on the vision of distance as given by colour, 1848, 48.
—— on the visual impressions upon the foramen centrale of the retina, 1848, 48.
——, examination of Bishop Berkeley's "new theory of vision," 1848, 49; 1849, 6.
—— on a binocular camera, 1849, 5.
—— on the photographic camera, 1849, 5.
—— on a new form of lenses, and their application to the construction of two telescopes or microscopes of exactly equal optical power, 1849, 6.
——, notice of experiments on circular crystals, 1849, 6.
—— on a new stereoscope, 1849, 6.
—— on the artificial magnets made by M. Logeman by the process of M. Elias, 1850, 4.
—— on a new membrane investing the crystalline lens of the ox, 1850, 4.
—— on the optical properties of the cyanurets of platinum and magnesia, and of barytes and platinum, 1850, 5.
—— on the polarizing structure of the eye, 1850, 5.
—— on some new phenomena in the polarization of the atmosphere, 1850, 6.
—— on improvements in photography, 1850, 6.
——, note by Dr. Jules Guyot, claiming the priority of the invention of the tubular bridge, 1850, 170.
—— on a tree struck by lightning in Clandeboye Park, 1852, 2.
—— on a case of vision without retina, 1852, 3.
—— on the form of images produced by lenses and mirrors of different sizes, 1852, 3.
—— on certain phenomena of diffraction, 1852, 24.
BREWSTER (Sir D.), account of a remarkable case of mirage, 1852, 24.
——, observations on the diamond, 1852, 41.
—— on the optical phenomena and crystallization of tourmaline, titanium, and quartz within mica, amethyst, and topaz, 1853, 3.
—— on the production of crystalline structure in crystallized powders by compression and traction, 1853, 3.
—— on the triple spectrum, 1855, 7.
*—— on the remains of plants in calcareous spar from King's county, Ireland, 1855, 9.
—— on the existence of acari in mica, 1855, 9.
—— on the binocular vision of surfaces of different colours, 1855, 9.
—— on the absorption of matter by the surfaces of bodies, 1855, 9.
*—— on the phenomena of decomposed glass, 1855, 10.
—— on the centering of the lenses of the compound object-glasses of microscopes, 1857, 4.
—— on the duration of luminous impressions on certain points of the retina, 1858, 6.
—— on vision through the foramen centrale of the retina, 1858, 7.
—— on certain abnormal structures in the crystalline lenses of animals, and in the human crystalline, 1858, 7.
—— on the crystalline lens of the cuttle-fish, 1858, 10.
—— on Prof. Petzval's new combination lens, 1858, 13.
—— on the use of amethyst plates in experiments on the polarization of light, 1858, 13.
—— on a new species of double refraction, 1859, 10.
—— on the decomposed glass found at Nineveh and other places, 1859, 11; 1860, 9.
—— on Sir Christopher Wren's cipher, containing three methods of finding the longitude, 1859, 34.
*—— on a horseshoe-nail found in the red sandstone of Kingoodie, 1859, 101; 1860, 73.
*—— on the connexion between the solar spots and magnetic disturbances, 1859, 245.
—— on a remarkable specimen of chalcedony, exhibiting a perfectly distinct and well-drawn landscape, 1859, 245.
—— on some optical illusions connected with the inversion of perspective, 1860, 7.
*—— on the influence of very small apertures on telescopic vision, 1860, 7.
—— on microscopic vision, and a new form of microscope, 1860, 8.
*BRIAN (Capt.) on the Africans of the neighbourhood of Bonny, 1846, 117.

BRIDGES (W.) on wooden railways, 1844, 97.
BRIGGS (Major-Gen.) on the cultivation of the cotton of commerce, 1839, 90.
—— on the aboriginal tribes of India, 1847, 118.
BRIGGS (H.) on industrial education, 1844, 112.
BRIGHT (E. B.) on magneto-electricity and underground wires, 1854, 8.
BRISBANE (Gen. Sir T. M.) on an apparent anomaly in the measure of rain, 1834, 560.
—— on the difference of longitude between London and Edinburgh, 1838, 20.
——, J. A. Broun on the results of the magnetic and meteorological observations made at his observatory, Makerstoun, 1845, 15; 1846, 32.
——, observations made at the expense of, to determine the variations of the laws of terrestrial magnetism with respect to height in the atmosphere, 1847, 19.
*BRITTON (J.) on the cathedrals and churches of the middle ages, 1839, 131.
*BROCKEDON (W.) on caoutchouc as a stopper for bottles, 1841, 106.
—— on the construction of a new rope employed as a core in the formation of the patent stoppers—a substitute for corks and bungs, 1842, 112.
—— on vulcanized caoutchouc, 1846, 113.
BRODHURST (B. E.) on the repair of tendons after their subcutaneous division, 1859, 160.
*BRODIE (Prof. B. C.) on a new combination of carbon, oxygen, and hydrogen, formed by the oxidation of graphite, 1856, 50.
—— on the quantitative estimation of the peroxide of hydrogen, 1860, 66.
BRODIE (Rev. J.) on a new mode of propelling fluids, or a uniformly propelling wheel, 1840, 190.
BRODIE (Rev. P. B.) on the discovery of insects in the lower beds of lias of Gloucestershire, 1842, 58.
—— on the Stonesfield slate at Collyweston near Stamford, and the great oolite, inferior oolite, and lias, in the neighbourhood of Grantham, 1850, 74.
—— on new species of corals in the lias of Gloucestershire, Worcestershire, and Warwickshre, 1856, 64.
—— on new species of Pollicipes in the inferior oolite near Stroud, 1856, 64.
—— on the stratigraphical position of certain species of corals in the lias, 1860, 73.
BRODRICK (C.) on the roof of the new Town Hall, Leeds, 1858, 207.
BROMBY (Rev. C. H.), suggestions on the people's education, 1856, 130.
BROMEIS (Dr. C.) on the formation of cyanuret of potassium in a blast furnace, 1842, 34.
BROMEIS (Dr. C.) on the compounds of carbon and iron, 1842, 34.
*BROOK (Dr.), description of the sound useful for the detection of small calculi, 1843, 81.
—— on an instrument to assist in the discovery of foreign bodies by auscultation, 1845, 86.
BROOKE (C.) on a new mode of suture applicable to plastic operations, 1845, 84.
—— on the construction of a self-registering barometer, thermometer, and psychrometer, 1846, 17.
—— on the results obtained by automatic registration of the declinometer, 1847, 40.
—— on some phenomena of photography, 1847, 48.
—— on photographic paper for automatic registration, 1849, 34.
—— on a new mode of illuminating opake objects under the highest powers of the microscope, 1851, 7.
—— on a new arrangement for facilitating the dissection and drawing of objects placed under the microscope, 1851, 7.
—— on an easy method of making thin glass cells for mounting microscopic objects in fluid, 1854, 47.
—— on diminishing the strain on the Atlantic cable by an elastic regulator, 1857, 180.
—— on a portable microscope, 1858, 143.
BROOKE (Sir J.) on the geography of the northern portion of Borneo, 1851, 89.
BROOME (C. E.) on the probability of the conversion of asci into spores in certain fungi, 1851, 70.
BROUGHAM (Lord) on the inflexion of light, 1849, 7.
BROUGHTON (S. D.) on the progress of physiological research, 1831–32, 598.
—— on the sensibilities of the cerebral nerves, 1834, 676.
—— on the sensibility of the glosso-pharyngeal nerve, 1836, 125.
BROUN (J. A.) on some results of the magnetic and meteorological observations made at Sir T. M. Brisbane's observatory, Makerstoun, 1845, 15; 1846, 32.
—— observations made to determine the variations of the laws of terrestrial magnetism with respect to height in the atmosphere, 1847, 19.
—— on the diurnal motion of a magnet freely suspended in the direction of magnetic dip, 1847, 20.
—— on the diurnal variation of magnetic declination and the annual variation of magnetic force, 1849, 8.
*—— on the effect of height on the diurnal variation of the horizontal complement of the magnetic force, 1850, 7.
*—— on the variation with season of the dif-

ferences of the mean pressure at Greenwich and Makerstoun, 1850, 7.
*Broun (J. A.) on electrical figures of dust on plate glass, 1850, 7.
—— on the effect of height in the atmosphere on the diurnal variation of magnetic declination, 1850, 7.
—— on the mechanical compensation of the bifilar and balance magnets for variation of the magnetic moment with temperature, 1850, 9.
—— on the construction of silk suspension threads for the declination magnetometer, 1850, 10.
*—— on the attempts to resolve the pressure of the atmosphere into two parts, that of vapour and dry air, 1850, 31.
—— on the establishment of a magnetic meteorological and astronomical observatory on the mountain of Angusta Mullay, at 6200 feet, in Travancore, 1855, 25.
—— on the establishment of a meteorological and magnetical observatory at Travancore, at 6200 feet above the level of the sea, with results of magnetical observations at Trevandrum, 1858, 30.
*——, notice of the Kanikars, a hill-side tribe in the kingdom of Travancore, 1858, 148.
—— on the semidiurnal and annual variations of the barometer, 1859, 43.
—— on results of observations in the observatory of His Highness the Rajah of Travancore, 1860, 20.
—— on the diurnal variations of the magnetic declination at the magnetic equator, and the decennial period, 1860, 21.
—— on a new induction dip-circle, 1860, 23.
—— on magnetic rocks in South India, 1860, 24.
—— on a magnetic survey of the West coast of India, 1860, 27.
—— on the velocity of earthquake shocks in the laterite of India, 1860, 74.
Brown (A.) on the extraordinary flux and reflux of the sea, July 1843, at Arbroath, 1843, 18.
—— on the fall of rain at Arbroath, 1855, 30.
—— on the fall of rain in Forfarshire, 1859, 47.
Brown (John), notice of a gold casting illustrative of the state of art in New Granada prior to the conquest, 1845, 78.
Brown (Dr. R.) on the plurality and development of embryos in the seeds of Coniferæ, 1834, 596.
Brown (Dr. S.) on the artificial crystallization of metallic carburets, 1839, 39.
Brown (S.) on the advantages to statistical science of a uniform decimal system of measures, weights, and coins throughout the world, 1856, 133.
*—— on the proportion of marriages at different ages of the sexes, 1857, 156.
Brown (S.) on the financial prospects of British railways, 1858, 172.
*Brunel (Sir I.) on the Thames tunnel, 1841, 106.
—— on the Thames tunnel in its completed condition, 1842, 111.
Brunton (W.) on a machine for ventilating coal-mines, 1849, 111.
Bryce (J.) on some caverns containing bones near the Giant's Causeway, 1834, 658.
Bryce (J., jun.) on striated and polished rocks and "roches moutonnées" in the Lake district of Westmoreland, 1850, 76, 112.
—— on the Lesmahago and Douglas coalfield in Lanarkshire, 1850, 77.
—— on the geological structure of the counties of Down and Antrim, 1852, 42.
*—— on the disposition of granite blocks in Argyllshire, 1852, 43.
—— on the glacial phenomena of the Lake district of England, 1855, 80.
*—— on a lately discovered tract of granite in Arran, 1855, 80.
—— on the discovery of Silurian fossils in the slates of Downshire, 1859, 260.
Bryce (Rev. Dr.), account of a treatise on arithmetic in the Chinese language by the Rev. Dr. Moncrieff, 1852, 1.
Bryson (A.) on a new instrument for measuring the refractive power of minute bodies, 1840, 87.
—— on a curious structure in the Silurian slates of Peebleshire, 1854, 78.
*—— on sections of fossils from the coal-formation of Mid-Lothian, 1855, 80.
*Buchan (P.) on the composition of the iron-ores of the Leitrim coal-field, 1857, 44.
Buchanan (Prof. A.) on a method of separating, by filtration, the coagulable lymph from liquid human blood, 1840, 75.
—— on fibrine of human blood, 1840, 156.
—— on the physiological law of mortality, and on certain deviations from it, observed about the commencement of adult life, 1855, 160.
—— on a mechanical process by which a life table commencing at birth may be converted into a table, in every respect similar, commencing at any other period of life, 1855, 163.
Buchanan (G.) on improvements in valves, stopcocks or stoppers for regulating the passage of fluids, 1850, 171.
Buchanan (J.) on a new locking apparatus for carriages, 1844, 98.
—— on ancient canoes found at Glasgow, 1855, 80.
Buckingham (Duke of) on the geological structure of the island of Pantellaria, 1831–32, 592.
Buckland (Rev. Dr.) on a scale of geological colours, 1831–32, 592.

*Buckland (Rev. Dr.), notice of a large fossil marine plant found in the new red sandstone, 1834, 666.
—— on the footsteps of the Cheirotherium in the stone quarries of Storeton Hill, Liverpool, 1838, 85.
——, exhibited and explained enlarged sections, copied from Cotta's sections, showing granite and syenite overlying strata of the chalk formation in Saxony, 1838, 85.
——, notice of Mr. Oram's plan for cementing small coal and coal-dust for fuel, 1838, 85.
—— on the action of acidulated waters on the surface of the chalk near Gravesend, 1839, 76.
—— on a series of specimens from granite quarries near Prince Town, Dartmoor, 1841, 64.
—— notice of Mr. Sopwith's models for illustration of strata, mineral veins, &c., 1841, 67.
—— on recent and fossil semicircular cavities caused by air-bubbles on the surface of soft clay, and resembling impressions of rain-drops, 1842, 57.
—— on perforations in limestone, 1842, 57.
—— on the agency of land snails in forming holes and trackways in compact limestone, 1845, 48.
—— on the mechanical action of animals on hard and soft substances during the progress of stratification, 1845, 52.
—— on the applicability of M. Fauvelle's mode of boring artesian wells to the well at Southampton, and to other wells, and to the sinking for coal, salt, and other mineral beds, 1846, 56.
——, notice of a map of part of North Wales, and sketches of rocks in the valleys around Snowdon, indicating the former existence of glaciers in these valleys, 1848, 78.
——, notice of a large Plesiosaurus discovered in lias near Whitby, 1848, 78.
—— on the cause of the general presence of phosphorus in strata and in all fertile soils, also on pseudo-coprolites, and the conversion of the contents of sewers and cesspools into manure, 1849, 67.
*Buckland (F. T.) on the acclimatization of animals, birds, &c., 1860, 113.
Buckman (Prof. J.) on the discovery of a new species of Hypanthocrinite in the upper Silurian strata, 1846, 61.
—— on the age of the Silurian limestone of Hay Head, near Barr Beacon, in Staffordshire, 1846, 61.
—— on the discovery of some new Cystideans from the Wenlock shale near Walsall, 1847, 61.
—— on the occurrence of marine plants in Worcestershire, 1847, 61.
—— on the discovery of some remains of the fossil Sepia in the lias of Gloucestershire, 1848, 66.
Buckman (Prof. J.) on the plants of the "insect limestone" of the lower lias, 1848, 66.
—— on some experimental borings in search of coal, 1848, 67.
—— on fairy rings, and on some of the edible fungi by which they are caused, 1849, 70.
—— on some chemical facts connected with the tessellated pavements discovered at Cirencester, 1850, 48.
—— on the cornbrash of Gloucestershire and part of Wilts, 1853, 50.
—— on the growth of Symphytum officinale, 1853, 63.
—— on two elephants' tusks found in the Stroud Valley, Gloucester, 1854, 78.
—— on coal deposits in West Virginia, 1854, 78.
—— on the basement-beds of the oolite, 1856, 64.
*—— on the oolite rocks of the Cotteswold Hills, 1856, 65.
——, notes on experiments in the Botanical Gardens of the Royal Agricultural College, 1856, 83.
—— on some antiques found at Cirencester as evidence of the domestic manners of the Romans, 1856, 108.
—— on the finding of Cnicus tuberosus at Avebury Hills, 1857, 95.
Buckton (G. B.) on the application of cyanide of potassium to killing insects for the cabinet, 1854, 106.
—— on pentethyl-stibene, 1859, 66.
*—— on some reactions of zinc-ethyl, 1860, 66.
Buckton (J.), notice of some of the articles shown in the Mechanical Section of the Leeds Exhibition of Local Industry, 1858, 208.
Budd (J. P.) on the advantageous use made of the gaseous escape from the blast-furnaces at Ystalyfera, 1850, 172.
Buddle (J.) on the Newcastle coal-field, 1838, 74.
Budge (R.) on the great earthquake in Chile, 1851, 85.
Buist (M.) on a nail found imbedded in a block of sandstone from Kingoodie (Mylnfield) Quarry, North Britain, 1844, 51.
Buist (Dr. G.), meteorological phenomena observed in India, 1849, 15.
—— on the climate of Western India, 1851, 29.
—— on hail-storms in India, 1851, 31.
—— on indications of upheavals and depressions of the land in India, 1851, 55.
——, note on Mr. Pyle's meteorological observations at Futtegurh, Bengal, 1851, 40.
——, experiments in the island of Bombay to determine the fall of rain at different heights, 1852, 25.
—— on atmospheric daily and yearly fluctuations, 1852, 25.

BUIST (Dr. G.) on the currents of the Indian seas, 1853, 12.
—— on remarkable hailstorms in India, 1855, 31.
—— on the Lotus or sacred bean of India, 1857, 96.
*—— on the geology of Lower Egypt, 1859, 101.
—— on the failure of bright-coloured flowers in forest trees to produce pictorial effect on the landscape, unless accompanied by abundance of green leaves, 1859, 130.
—— on some peculiarities of the silk trees, or Bombaceæ, of Western India, 1859, 132.
—— on the aversion of certain trees and plants to the neighbourhood of each other, 1859, 133.
BULLAR (Dr. J.) on the identity of certain vital and electro-magnetic laws, 1846, 29.
BUNBURY (Sir C.) on the occurrence in the Tarentaise of fossil plants of the carboniferous period, associated in the same bed with belemnites, 1848, 64.
BUNSEN (Prof.) on a new mode of estimating nitrogen in organic analysis, 1840, 77.
—— on the compound or radical called kakodyl, 1840, 77.
—— on the radical of the kakodyl series, 1841, 55.
—— on kakodylic acid and the sulphurets of kakodyl, 1842, 35.
——, photochemical researches, with reference to the laws of the chemical action of light, 1855, 48.
BUNSEN (The Chevalier) on certain new vocabularies from the eastern coast of Africa, 1847, 119.
—— on Prussian statistics, 1849, 86.
BURGOYNE (Major-Gen. Sir J.), communication regarding the progress made in the publication of the Trigonometrical Survey, 1853, 37.
BURN (Dr. A.) on the growth of cotton in India, 1840, 146.
*BURNETT (C. J.), notice of the use of platinum in photography, 1859, 258.
*BURNETT (S. M.) on the zoology of Aberdeenshire, 1859, 144.
BURT (Mr.) on the nomenclature of clouds, 1833, 460.
*BURTON (Lieut.-Col.), visit to Medina from Suez, by way of Jambo, 1855, 147.
BUSK (G.) on the employment of gutta percha for modelling, 1847, 81.
—— on the use of gutta percha for making moulds for casts of objects in natural history, &c., 1847, 92.
——, list of Sertularian zoophytes and Polyzoa from Port Natal, Algoa Bay, and Table Bay in South Africa, with remarks on their geographical distribution, and observations on the genera Plumularia and Catenicella, 1850, 118.
*——, exhibited drawings of new species of zoophytes, 1851, 76.
——, list of marine Polyzoa collected by G. Barlee, Esq., in Shetland and the Orkneys, with descriptions of the new species, 1859, 144.
BUTTER (Dr. J.) on the pathology and cure of squinting, 1841, 79.
BUXTON (D.) on the census (in 1851) of the deaf and dumb, 1854, 132.
BYERLY (I.) on the fauna of Liverpool, 1854, 107.
BYRNE (OLIVER) on a new proportional compass, 1844, 8.
*—— on the improved compasses of M. De Sire Lebrun, and the cold-drawn pipes of M. Le Dru, 1844, 99.
——, notice of the Barège mobile, or canalisation of rivers, and of the Grenier mobile, or moveable granary for preserving corn, 1844, 99.

CAINE (Rev. W.) on the progress of public opinion with respect to the evils produced by the traffic in intoxicating drink, 1859, 205.
CAIRNES (Prof.) on some of the principal effects of the new gold, as an instrument of purchase, in the production and distribution of real wealth, 1857, 156.
—— on the laws according to which a depreciation of the precious metals consequent upon an increase of supply takes place, considered in connexion with the recent gold discoveries, 1858, 174.
CALDECOTT (Mr.) on meteorological observations made at Trevandrum, 1840, 28.
CALDWELL (Dr.) on the varieties of the human race, 1841, 75.
CALLAN (Rev. Prof.) on the electro-dynamic induction machine, 1857, 11.
CALVERT (Prof. F. C.) on the physiological properties of carbazotic acid, 1854, 65.
—— on the action of gallic and tannic acids on iron and alumina mordants, 1854, 65.
—— on the action of citric, tartaric, and oxalic acids on cotton and flax fibres under the influence of dry heat and pressure of steam, 1854, 65.
—— on the manufacture of iron by purified coke, 1855, 49.
—— on alloys, 1855, 50.
—— on the action of sulphuretted hydrogen on salts of zinc and copper, 1855, 51.
*—— on the action of the carbo-azotic acid and the carbo-azotates on the human body, 1855, 121.
—— on the incrustations of blast furnaces, 1856, 50.
—— on the expansion of metals, alloys, and salts, 1858, 46.
—— on the specific gravities of alloys, 1859, 66.
—— on the formation of rosolate of lime on cotton fabrics in hot climates, 1859, 68.
*CALVERT (J.) on the supply of gold from Australia and from English rocks, 1854, 133.

CALVO (GIOVANNI), the founder of the Monte di Pietà of Rome, 1841, 91.
CAMERON (Dr. C. A.) on urea as a direct source of nitrogen to vegetation, 1857, 44.
CAMERON (P.) on the making and magnetizing of steel magnets, 1855, 10.
*—— on the deviations of the compass in iron ships, 1855, 10.
CAMPBELL (DUGALD) on the action of the soap-test upon water containing a salt of magnesia only, and likewise upon water containing a salt of magnesia and a salt of lime, 1850, 49.
—— on Dr. Clarke's process for softening water, 1855, 54.
CAMPBELL (J. A.) on the auriferous quartz formations of Australia, 1855, 81.
CAMPBELL (R.) on the probability of uniformity in statistical tables, 1859, 3.
*CAMPS (Dr. W.) on an abnormal condition of the nervous system, 1855, 121.
—— on the laws of consanguinity and descent of the Iroquois, 1859, 177.
*—— on certain imperfectly recognized functions of the optic thalami, 1859, 265.
*—— on certain subjective sensations, with especial reference to the phenomena of second sight, visions, and apparitions, 1859, 265.
*CANINO (Prince of) on the characters which distinguish the little blue magpie of Spain from that of Siberia, and on the new Caprimulgus of Hungary, which belongs to the genus Cordylis, 1849, 75.
——, zoological notices, 1852, 72.
——, notice of his work 'Fauna Italica,' 1843, 70.
CANTER (Dr.) on Malacca guano, 1845, 39.
*CARDIGAN (Archdeacon of) on the site of Ecbatana, 1856, 108.
CARGILL (Mr.) on educational statistics of Newcastle, 1838, 165.
CARLILE (H.) on the motions and sounds of the heart, 1833, 454.
—— on the structure of the sacrum in man, &c., 1837, 112.
—— on some remarkable malformations of the cerebellum, 1837, 113.
—— on the functions of the human ear, 1857, 116.
CARLILE (WARRAND) on dials which give the latitude, the line of north and south, and chronometer time, 1858, 41.
CARMICHAEL (R.) on cancerous and tuberculous diseases, 1836, 112.
CARNE (J.) on the mineral veins of Cornwall, 1831–32, 586.
CARNEGIE (Hon. Capt.) on the earthquake (Feb. 8, 1843) at the islands of Antigua and Guadaloupe, 1843, 59.
*CARPENTER (Rev. L.) on Lucas's method of printing for the blind, 1836, 41.
CARPENTER (MARY) on the position of reformatory schools in reference to the State, and their management, 1856, 134.
— on educational help from the Government Grant to the destitute and neglected children of Great Britain, 1860, 184.
CARPENTER (P. P.) on land, freshwater, and marine shells obtained in sinking a well on the banks of the Avon, at Birlingham, 1854, 78.
—— on shells from Mazatlan, 1854, 107.
—— on peculiarities of growth in Cæcidæ, 1857, 102.
—— on the progress of natural science in the United States and Canada, 1860, 109.
CARPENTER (Capt.) on the duplex rudder and screw propeller, 1851, 110.
CARPENTER (Dr. W. B.) on the microscopic structure of shells, 1843, 71.
—— on the position of the compound Ascidians in the zoological scale, 1844, 66.
——, notice of his researches on the microscopic character of shells, and on representing natural-history objects by means of photography, 1846, 82.
*—— on the structure of the Pycnogonidæ, 1846, 82.
—— on the physiology of the encephalon, 1846, 92.
—— on photography applied to microscopic objects, 1847, 48.
*—— on Marginopora and allied structures, 1848, 67.
—— on the development of the embryo of Purpura lapillus, 1854, 108.
—— on the occurrence of the pentacrinoid larva of Comatula rosacea, in Lamlash Bay, Isle of Arran, 1855, 107.
—— on the structure and development of Orbitolites complanatus, 1855, 107.
*CARPENTER (W. R.) on the criteria by which species are to be distinguished in zoology and botany, 1836, 99.
*CARPMAEL (W.), method of rolling dovetailed grooves for railways, 1839, 131.
CARRETT (W. E.) on some modern appliances for raising water, 1858, 208.
*CARRINGTON (F. A.) on geographical maps and models, 1847, 63.
CARRINGTON (Dr.) on the geological distribution of plants in some districts of Yorkshire, 1858, 115.
CARSON (Dr.) on absorption, 1836, 119.
—— on the motion of the blood in the head, and on the uses of the ventricles and convolutions of the brain, 1837, 123.
—— on a case of unusual paralysis, 1842, 85.
CARSON (J., jun.) on the uses of the muscular fibres of the bronchial tubes, 1842, 80.
*CARTE (A. G.) on the use of rockets in effecting a communication with stranded vessels, 1849, 114.
CARTER (Mr.) on the jaws of an Ichthyosaurus from the chalk in the neighbourhood of Cambridge, 1845, 60.
CARUS (Prof.) on the value of "development" in systematic zoology and animal morphology, 1860, 125.

CARUS (Prof.) on the Leptocephalidæ, 1860, 125.
CATLOW (J. P.) on the relation of the season of birth to the mortality of children under two years of age, &c., 1842, 80.
—— on a relation between the season of death and the anniversary of the season of birth, which varies with each month of birth; and on a similarly varying tendency to death in the anniversary of the natal month, 1843, 95.
CAUNTER (H.), notice of a diatomaceous deposit found in the island of Lewis, 1859, 133.
*CAYLEY (A.) on the solution of cubic and biquadratic equations, 1854, 1.
—— on the porism of the in-and-circumscribed triangle, 1855, 1.
—— on the notion of distance in analytical geometry, 1858, 3.
—— on curves of the fourth order having three double points, 1860, 4.
CEELY (Mr.), experiments on smallpox matter, 1839, 106.
CHACORNAC (M.) on solar spots and faculæ, and their true causes, 1854, 19.
CHADWICK (D.) on water-meters, 1860, 204.
*CHADWICK (E.) on the economical, educational, and social importance of open and public competitive examinations, 1857, 158.
*—— on the dependence of moral and criminal on physical conditions of populations, 1857, 158.
*—— on the progress of the principle of open competitive examinations, 1858, 175.
*—— on the economical results of military drill in popular schools, 1860, 185.
—— on the physiological as well as psychological limits to mental labour, 1860, 185.
CHAIX (Prof. P.), census of Switzerland, 1853, 102.
CHALLIS (Rev. Prof.) on some facts relating to the composition of the colours of the spectrum, 1834, 544.
—— on the vibrations of a cylindrical tube, 1835, 12.
—— on the aberration of light, 1845, 9.
—— on a new theory of the polarization of light, 1847, 1.
——, description of a new instrument for observing the apparent positions of meteors, 1848, 13.
*CHALMERS (Dr.) on the application of statistics to moral and economic science, 1840, 185.
*—— on the pauperism of Glasgow, 1840, 185.
*CHALMERS (Rev. P.) on the parish of Dunfermline, 1840, 186.
CHAMBERS (R.) on certain plans for ventilation adopted in Glasgow, 1842, 109.
—— on the glacial phenomena of the neighbourhood of Edinburgh, 1850, 78.
—— on the great terrace of erosion in Scotland, and its relative date and connexion with glacial phenomena, 1854, 78.
CHAMBERS (R.), further observations on glacial phenomena in Scotland and the north of England, 1854, 79.
*—— on denudation and other effects usually attributed to water, 1855, 81.
CHANTER (J.), description of a furnace for economizing fuel and preventing smoke, 1843, 99.
—— on the economical working of steam boilers, 1854, 147.
CHAPMAN (Prof.) on the isomorphous relations of silica and alumina, 1850, 50.
*CHAPMAN (H. S.), statistics of New Zealand, 1851, 98.
CHARLESWORTH (E.) on the remains of vertebrated animals in the tertiary beds of Norfolk and Suffolk, 1836, 84.
—— on Mr. Lyell's classification of tertiary deposits, 1836, 86.
—— on a large specimen of Plesiosaurus found at Kettleness, on the Yorkshire coast, 1844, 49.
—— on the fossil bodies regarded by M. Agassiz as the teeth of a fish, and upon which he has founded his supposed genus Sphenonchus, 1845, 56.
—— on the occurrence of the Mososaurus in the Essex chalk, and on the discovery of flint within the pulp-cavities of its teeth, 1845, 60.
—— on some new species of Testacea from the Hampshire tertiary beds, 1849, 52.
—— on the curious spiral body in certain fossil sponges, and on several other remarkable fossils from the Yorkshire strata, 1853, 51.
—— on new vertebrate fossils, 1854, 80.
*—— on some remarkable Yorkshire fossils, including the unique Plesiosauri in the museum at York, 1858, 223.
CHARLTON (Dr. E.) on Tetrao Rakelhahn, 1838, 107.
CHARLTON (W. H.), statistics of Bellingham, in Northumberland, 1838, 168.
*CHARTERS (Major) on the Alps in the vicinity of Mont Blanc, 1852, 43.
CHATFIELD (H.) on British naval architecture, 1836, 129.
CHATFIELD (W.) on Truscott's plan for reefing paddle-wheels, 1841, 101.
CHESHIRE (E.) on the results of the census of Great Britain in 1851, with a description of the machinery and processes employed to obtain the returns, 1853, 98.
——, statistics relative to Nova Scotia, 1853, 102.
CHESNEY (Major-General) on the Euphrates line of communication with India, 1852, 104.
—— on the tubular or double life-boat, invented by Henry Richardson, 1853, 113.
—— on the routes of communication between England and India, 1857, 123.
—— on the extension of communications to distant places by means of electric wires, 1858, 148.

CHEVALLIER (Rev. Prof.) on the computation of heights by the barometer, 1838, 38.
—— on the height of auroral arches, 1847, 7.
—— on a graphical method of computing an occultation, 1847, 7.
—— on a rainbow seen after actual sunset, 1849, 16.
*—— on a sidereal clock for showing the arc of right ascension directly, 1850, 23.
—— on an analogy between heat and electricity, 1855, 10.
—— on a rainbow seen after sunset, 1855, 38.
—— on the tides of Nova Scotia, 1856, 23.
CHEVERTON (Mr.) on mechanical sculpture, 1835, 112.
CHILDERS (J. W.), comparative temperature table, showing the daily average height of the thermometer at Jersey, Torquay, Hastings, and London, 1848, 16.
CHILDERS (Capt. W. W.), meteorological observations made at St. Helier, Jersey, 1846, 13.
CHRISTIE (Prof. S. H.) on a peculiar and well-defined light, in the form of a ray, from the sun, 1834, 566.
—— on a singular optical phenomenon seen at sunset, 1837, 15.
—— on the occurrence of the aurora borealis in England during summer, 1837, 28.
—— on the preservation of magnetic needles and bars from oxidation by the electrotype process, 1841, 41.
CLANNY (Dr.), a new telegraph, 1837, 131.
*——, a new safety-lamp, 1842, 115.
CLARE (P.) on some extraordinary electrical appearances seen in 1850, 1850, 31.
CLARK (D. K.) on coal-burning without smoke, by the method of steam-inducted air-currents applied to the locomotive engines of the Great North of Scotland Railway, 1859, 230.
CLARK (F.) on the educational statistics of Birmingham, 1839, 111.
—— on the commercial statistics of Birmingham, 1839, 114.
—— on the medical statistics of Birmingham, 1839, 115.
CLARK (J.), notice of the occurrence of Colymbus arcticus near Swansea, 1848, 125.
CLARK (P.) on the flowering of Victoria regia in the Royal Botanic Garden, Glasgow, 1855, 102.
CLARK (Dr. T.) on the atomic weights of elementary bodies, 1839, 43.
—— on a mode of detecting minute portions of arsenic, 1840, 83.
CLARK (Dr.) on the application of the hot blast to the production of cast iron, 1834, 578.
CLARK's (Dr.) process for softening water, D. Campbell on, 1855, 54.
CLARKE (Rev. Mr.), letters from Prof. Hitchcock on foot-impressions in the new red sandstone, 1837, 60.
*CLARKE (Dr.) on a method of facilitating the calculations of gases, 1837, 57.
CLARKE (Mr.), large electro-magnet, 1840, 211.
*CLARKE (Mr.) on the principles on which the model tubes for the tubular bridges on the Holyhead Railway should be increased to larger dimensions, 1846, 109.
*—— on a new atmospheric tube, 1846, 113.
CLARKE (Dr.) on certain alterations of level on the sea-coast of part of the county of Waterford, 1857, 65.
*CLARKE (A.) on a mode of correcting the errors of the compass in iron ships, 1860, 28.
CLARKE (B.) on the foliage and inflorescence of the genera Phyllanthus and Xylophylla, 1846, 91.
*—— on a new system of classifying plants, 1853, 63.
CLARKE (Rev. B. J.) on the Irish species of the genus Limax, 1843, 73.
CLARKE (G.) on the evolution of gas in Wallsend Colliery, 1852, 124.
CLARKE (Dr. J.), abstract of a registry kept in the Lying-in Hospital, Dublin, 1834, 685.
CLARKE (J.) on the parasitic character of Rhinanthus crista-galli, 1848, 84.
*CLARKE (R.) on prevailing diseases of Sierra Leone, 1855, 164.
CLARKE (Rev. W. B.) on two springs on the north side of Hales Bay, Poole Harbour, 1836, 94.
CLARKE (Rev. W. D.) on the phenomena of the plastic clay formation, near Poole, 1837, 93.
CLARKE (W. H.) on a fish with four eyes, 1838, 110.
CLARKE and VARLEY (Messrs.) on the elastic malleable iron tube, as a means of developing the principle of atmospheric propulsion on railways, 1847, 132.
CLAUDET (A.) on different properties of the solar radiation in producing or preventing a deposit of mercury on silver plates coated with iodine or its compounds, with chlorine and bromine, modified by coloured glass media and the vapours of the atmosphere, 1847, 35.
—— on the action of the red, orange, and yellow rays upon iodized and bromo-iodized silver plates, 1848, 50.
—— on the theory of the principal phenomena of photography in the Daguerreotype process, 1849, 35.
—— on the dynactinometer, for comparing the power of object-glasses, and for measuring the intensity of the photogenic light, 1850, 12.
—— on the dangers of the mercurial vapours in the Daguerreotype process, 1851, 44.
—— on the use of a polygon to ascertain the intensity of the light at different angles, 1851, 45.
—— on the stereoscopometer, 1852, 6.

CLAUDET (A.) on a manifold binocular camera, 1852, 6.
—— on the angle to be given to binocular photographic pictures for the stereoscope, 1853, 4.
—— on the practice of the Daguerreotype, 1853, 4.
*—— on the polystereopticon, 1855, 10.
—— on various phenomena of refraction through semi-lenses producing anomalies in the illusion of stereoscopic images, 1856, 9.
—— on the focus of object-glasses, 1859, 61.
*—— on the stereoscopic angle, 1859, 61.
*—— on the stereomonoscope, 1859, 61.
—— on a changing diaphragm for double achromatic combinations, 1859, 62.
—— on the means of increasing the angle of binocular instruments, to obtain a stereoscopic effect in proportion to their magnifying power, 1860, 61.
—— on the principles of the solar camera, 1860, 62.
CLAUSSEN (Chevalier) on the effect of sulphate of lime upon vegetable substances, 1853, 38.
—— on the preservation of the potato crops, 1855, 54.
—— on the Hancornia speciosa, artificial gutta percha and india-rubber, 1855, 103.
—— on the employment of Algæ and other plants in the manufacture of soaps, 1855, 103.
—— on Papyrus, Bonapartea, and other plants which can furnish fibre for paper pulp, 1855, 104.
CLAY (Dr. C.) on the evils arising from the use of common pessaries, 1842, 87.
—— on diabetes mellitus, 1842, 87.
*CLAY (H.) on the effect of good and bad times on committals to prison, 1857, 158.
CLAY (Rev. J.) on the effect of good and bad times on committals to prison, 1854, 133.
CLAY (J. T.) on the occurrence of boulders in the valley of the Calder, 1842, 55.
CLAY (W.) on the large fly-wheel erected at the Mersey Iron-works, Liverpool, 1854, 147.
—— on a machine used for rolling taper iron, 1854, 148.
*—— on the manufacture of the large wrought-iron gun, and other masses of iron made at the Mersey Iron-works, Liverpool, 1856, 162.
CLEAR (W.) on the insects of the county of Cork, 1843, 76.
CLEGG (Mr.) on a dry gas-meter, 1842, 111.
CLEGHORN (Dr. H.) on the grass-cloth (Chū Mā) of India, 1850, 112.
—— on the hedge plants of India, and the conditions which adapt them for special purposes and particular localities, 1850, 113.
CLEGHORN (J.) on the fluctuations in the herring fisheries, 1854, 134, 176.
CLEGHORN (J.) on the submerged forests of Caithness, 1859, 101.
CLELAND (Dr. J.), statistics of Glasgow, 1834, 685.
—— on the Glasgow Bridewell, 1835, 123.
—— on the population, trade, and commerce of Glasgow, 1840, 174.
CLENDINNING (Dr.) on the statistics of health, elucidated by the Marylebone Infirmary, 1844, 96.
CLERKE (Major S.), notice of Mr. Wylde's 'Atlas of Sieges and Battles in the Peninsula,' 1841, 67.
CLIBBORN (E.) on the tendency of European races to become extinct in the United States, 1856, 136.
CLOUSTON (Rev. C.), remarks on the climate of Orkney, 1859, 43.
CLUTTERBUCK (Rev. J. C.) on the course of the Thames from Lechlade to Windsor, as ruled by the geological formations over which it passes, 1860, 75.
COATHUPE (C. T.) on the blue pigment of Dr. Traill, 1838, 61.
—— on an improved method of graduating glass tubes for eudiometrical purposes, 1839, 62.
——, apparatus for determining the quantity of carbonic acid gas in deteriorated atmospheres, 1839, 63.
—— on the respiration of deteriorated atmospheres, 1839, 108.
—— on an improved sight for rifles and other firearms, 1841, 104.
COBBOLD (Dr. T. S.) on a new species of Trematode worm (Fasciola gigantica) 1855, 108.
—— on a malformed trout, 1855, 109.
—— on a curious pouched condition of the glandulæ Peyerianæ in the giraffe, 1855, 122.
COCKBURN (Very Rev. Dr.) on Dr. Buckland's Bridgewater Treatise, 1844, 44.
COCKBURN (Capt.) on anemometers and resolving scales, 1847, 40.
*COCKS (Mr.) on the mortality of the metropolis, 1851, 98.
*CODY (P.) on the trisection of an angle, 1860, 4.
COHN (Dr. F.) on the sexuality of the Algæ, 1855, 122.
COLDSTREAM (Dr. J.) on the expediency of ascertaining the extent to which infantile idiocy prevails in the United Kingdom generally, and of inquiring into the causes of its prevalence in certain districts, 1858, 128.
—— on the results deducible from the report on the statistics of disease in Ireland, 1855, 164.
COLE (J. F.) on the aurora borealis as seen at Alten, 1844, 27; 1846, 12.
—— on a remarkable and sudden fall of rain with a clear sky at Alten, 1844, 28.
——, description of the lightning and thun-

der on August 16, 1844, at Alten, 1845, 19.
Cole (J. F.), meteorological observations made at Alten, 1846, 12; 1848, 32.
——, meteorological observations made at the Alten copper-works, Norway, 1850, 37.
—— on meteorological observations made at Kaafjord, in West Finmark, 1849, 18.
*Cole (R.), account of Lewis Paul and his invention of the machine for spinning cotton and wool by rollers, and his claim to such invention, to the exclusion of John Wyatt, 1858, 208.
*Coleman (J. J.) on the destruction of the bitter principle of Chyraitta by the agency of caustic alkali, 1860, 66.
—— on some remarkable relations existing between the atomic weights, atomic volumes, and properties of the chemical elements, 1860, 66.
Coles (Mr.) on a new step-rail, and railway carriages, 1840, 212.
Collingwood (Dr. Cuthbert) on the migration of birds, 1858, 121.
—— on the respiration of the nudibranchiate Mollusca 1860, 113.
—— on the nudibranchiate Mollusca of the Mersey and Dee, 1860, 113.
—— on recurrent animal form, and its significance in systematic zoology, 1860, 114.
Collins (Dr. R.), registry kept in the Lying-in Hospital, Dublin, 1835, 106.
—— on the periodicity of births, &c., 1836, 146.
Collins (M.) on the possible and impossible cases of quadratic duplicate equalities in the Diophantine analysis, 1855, 2.
Connell (Prof. A.), analysis of fossil scales, 1835, 41.
—— on the voltaic decomposition of alcohol, 1840, 81.
——, analysis of the American mineral nemalite, 1846, 39.
—— on the nature of lampic acid, 1846, 40.
—— on the precipitate caused in spring and river waters by acetate of lead, 1847, 48.
—— on sulphato-chloride of copper—a new mineral, 1847, 49.
——, improvements on a dew-point hygrometer, 1855, 38.
Conybeare (H.) on the physical geography of the neighbourhood of Bombay, as affecting the design of the works erected for the water-supply of that city, 1858, 149.
—— on an apparatus for laying down submarine telegraphic cables, 1858, 209.
Conybeare (Rev. W. D.) on the application to Great Britain and Ireland of M. de Beaumont's theory of the parallelism of contemporaneous lines of elevation, 1831–32, 587.
Conybeare (Rev. W. D.), 'Geological Section of Europe,' 1831–32, 583.
Cook (Capt. J. C.) on the genera Pinus and Abies, 1838, 117.
Cooke (L.) on a clock movement, and new mode of suspending the pendulum, 1843, 101.
Cooley (W. D.) on a physico-geographical survey of the British Islands, particularly in relation to agriculture, 1846, 72.
Coombe (Mr.) on expanding pulleys, 1858, 209.
*Cooper (E. J.), catalogue of mean places of fifty telescopic stars observed at Markrea Castle, 1843, 18.
—— on the perihelia and ascending nodes of the planets, 1858, 27.
——, extracts of letters from Mr. A. Graham on Donati's comet, 1858, 28.
Cooper (Dr. H.) on the mortality (autumn 1849) of Hull, 1853, 102.
—— on the prevalence of diseases in Hull, 1853, 103.
*Cooper (J.) on the drainage of the middle level of the Bedford level, 1852, 125.
Copperthwaite (W. C.) on the statistics of Old and New Malton, 1844, 89.
*Corbet (Dr.) on imbibition of prussiate of potash by plants, 1836, 107.
Corbett (Prof. J. H.) on the Acalephæ, with respect to organs of circulation and respiration, 1856, 91.
—— on Australian crania, 1857, 126.
—— on the deglutition of alimentary fluids, 1860, 216.
*Corle (T.) on the mortality in different sections of the metropolis, 1851, 99.
Cormack (Dr. J. R.) on the effects of air when injected into the veins, 1840, 157.
Corrigan (Dr.) on the mechanism of *bruit de soufflet*, 1835, 87.
Costello (Dr.) on cases of calculus treated by lithotrity, 1839, 109.
Cottam (G.) on the Marquis of Tweeddale's patent brick and tile machine, 1839, 128.
——, description of a new railway wheel, 1839, 128.
Couch's (Capt.) chock channels, Sir W. S. Harris on, 1841, 102.
Couch (J.) on the zoology of Cornwall, 1841, 68.
*—— on the migration of birds and flowering of plants in Cornwall, 1842, 66.
—— on the egg-purse and embryo of a species of Myliobatis, 1846, 80.
Couch (R. Q.) on the embryo state of Palinurus vulgaris, 1857, 102.
Cowan (Dr.) on the vital statistics of Glasgow, 1840, 173.
Cowper (E.) on a new mode of obtaining a blast of very high temperature in the manufacture of iron, 1860, 204.
Cox (H.) on the hyperbolic law of elasticity of cast iron, 1850, 172.

Cox (H.) on the parallelogram of mechanical magnitudes, 1851, 1.
*—— on the submergence of telegraphic cables, 1859, 11.
Craig (Rev. E.) on polarization, 1836, 19.
Craig (J.) on the coal formation of the west of Scotland, 1840, 89.
——, notice of sections of the railways between Glasgow and Greenock, and Greenock and Ayr, 1841, 67.
Crane (G.) on the smelting of iron with anthracite coal, 1837, 52.
Crawford (Dr.) on a case of anthracosis in a lead-miner, 1838, 130.
*Crawfurd (J.) on the Malay languages, 1847, 119.
——, vital statistics of a district in Java, 1848, 112.
—— on the alphabet of the Indian Archipelago, 1849, 83.
—— on the oriental words adopted in English, 1849, 84.
—— on the negro races of the Indian Archipelago and Pacific Islands, 1851, 86.
*—— on the geography of Borneo, with description of the condition of the island, and its chief products, illustrated by historical references, 1851, 88.
*—— on the different centres of civilization, 1855, 141.
—— on the effects of the gold of Australia and California, 1857, 160.
—— on the effects of commixture, locality, climate, and food on the races of man, 1858, 149.
—— on the relation of the domesticated animals to civilization, 1859, 177.
—— on the effects of the influx of the precious metals which followed the discovery of America. 1859, 205.
*—— on the effects of the recent gold discoveries, 1859, 205.
—— on the Aryan or Indo-Germanic theory of races, 1860, 154.
—— on the influence of domestic animals on the progress of civilization, 1860, 155.
*Croall (Mr.) on the more remarkable plants found in Braemar, 1859, 133.
Cronin (Mr.) on the statistical results of amputation, 1843, 84.
Crook (Dr. W. H.) on the unity of the coal-deposits of England and Wales, 1837, 75.
—— on a supposed connexion between an insufficient use of salt in food and the progress of Asiatic cholera, 1848, 88.
Crosse (A.) on the formation of artificial crystals, 1836, 47.
—— on the apparently mechanical action accompanying electric transfer, 1854, 66.
Crosse (Mrs.) on the apparent mechanical action accompanying electrical transfer, 1855, 55.
Crosskill (A.) on reaping-machinery, 1853, 114; 1858, 209.
Crowe (J. R.) on the climate of Norway and Finmark, 1844, 27.
——, meteorological observations for the year 1844 at Christiania, 1845, 19; 1846, 12; 1847, 33.
Cruickshank (A.) on the natural obstructions in the atmosphere preventing the view of distant objects on the earth's surface, 1859, 49.
Crum (W.) on the ageing of mordants in calico-printing, 1859, 258.
Cull (R.) on the misapplication of the terms 'evolution' and 'development,' as applied by ethnographical philologists to the inflections of a language, 1852, 82.
*—— on Blumenbach's classification of the human race, 1852, 84.
*—— on the ethnological value of the results of philological inquiry, 1854, 126.
*——, description of three Esquimaux lately exhibited in London, 1854, 126.
—— manual of ethnological inquiry and the ethnology of Polynesia, 1855, 141.
—— on some water-colour portraits of natives of Van Diemen's Land, 1855, 142.
*—— on the complexion and hair of the ancient Egyptians, 1855, 142.
*—— on a more positive knowledge of the changes, both physical and mental, in man, with a view to ascertain their causes, 1856, 108.
—— on the character, extent, and ethnological value of the Indo-European element in the language of Finland, 1857, 127.
*—— on Dr. Prichard's identification of the Russians with the Roxolani, 1858, 148.
*—— on certain remarkable deviations in the stature of Europeans, 1860, 155.
*—— on the existence of a true plural of the personal pronoun in a living European language, 1860, 155.
Cullen (General), observations of the fall of rain on the coast of Travancore and table-land of Uttree, 1846, 22.
——, barometrical levelings in the Madras Presidency, 1847, 42.
—— on the fall of rain on the table-land of Uttree Mullay, Travancore, 1848, 39.
Cullen (Dr.) on the gold-mines of the Isthmus of Darien, emigration to New Granada, and canalization of the Isthmus of Darien, 1850, 79.
*—— on a proposed canal across the Isthmus of Darien, 1851, 88.
*Culley (Mr.), notice of the plans for the transmission of time-signals through the telegraph wires in connexion with the observatory at Greenwich, 1854, 148.
Cumming (Rev. Prof. J.) on some electromagnetic instruments, 1833, 418.
—— on an instrument for measuring the

heating effect of the sun's rays, 1833, 418.
CUMMING (Rev. J. G.) on posidonian schist amidst trappean beds, and on traces of drift-ice in the south of the Isle of Man, 1845, 60.
—— on some of the more recent changes in the area of the Irish Sea, 1854, 80.
CUNNINGHAM (JAS.) on a method of constructing magnets, 1837, 38.
CUNNINGHAM (JNO.) on the submarine forest, Leasowe, 1854, 81.
—— on ventilation of ships, 1854, 148.
CUNNINGTON (W.) on a peculiarity in the structure of one of the fossil sponges of the chalk, Choanites Königi, 1848, 67.
CURTIS (Mr.) on the Hylurgus piniperda, 1836, 98.
CURTIS (W. J.) on a flexible suspension bridge, 1837, 132.
*—— on methods to increase security upon railways, 1839, 132.
*CURTIS (Prof.) on a system of geodetics and the conjugate system, &c., 1857, 2.
CYBULZ (Capt.) on a set of relief models of the Alps, &c., 1860, 155.

*DAA (Dr. L. K.) on the Varanger Fiord, 1856, 108.
*—— on the Torenic system of the Ugrians (Finns), Albanians, and other populations, 1856, 108.
*—— on the relation of the Siberian and Armenian languages, 1856, 108.
——, table of the Lapps and Finns in Norway, according to the census returns, 1856, 138.
*D'ABBADIE (A.), synopsis of seventy-two languages of Abyssinia and the adjacent countries, 1851, 88.
—— on the ethnological and physical characters of the negro variety of mankind, 1857, 117.
DALE (J.) on elliptic polarization, 1846, 5.
—— on a proposed optical experiment, 1847, 37.
DALE (Rev. T. P.) on some optical properties of phosphorus, 1858, 15.
—— on the relation between refractive index and volume among liquids, 1859, 12.
DALTON (Dr.), experiments on the quantity of food, compared with the quantity of the different secretions, 1831–32, 73.
—— on the effects of atmospheric pressure on the animal frame, 1831–32, 85.
——, analysis of pyroxylic spirit, 1835, 44.
—— on chemical symbols, 1836, 77.
—— on the non-production of carbonic acid by plants, 1837, 58.
*—— on microcosmic salt, 1842, 40.
*—— on a new and easy method of analysing sugar, 1842, 40.
*—— on the phosphates and arseniates, 1842, 40.
DALYELL (Sir J. G.) on the propagation of certain Scottish zoophytes, 1834, 598.
—— on the regeneration of lost organs discharging the functions of the head and viscera, by the Holothuria and Amphitrite, 1840, 139.
—— on exuviation, or the change of the integuments of animals in the Crustacean tribes, 1850, 120.
*DALYELL (Consul), earthquake at Erzerum, 1859, 266.
*DALZELL (Dr.) on crystallized bichromate of strontia, 1859, 68.
—— on the economical preparation of pure chromic acid, 1859, 68.
DALZIEL (Dr. J.) on sleep, and an apparatus for promoting artificial respiration, 1838, 127.
—— on hysteria, hydrophobia, and other convulsive affections, embracing an analysis of the phenomena of water-dread, 1850, 129.
DALZIELL (Mr.), notice of a method of pumping water from leaky vessels at sea, 1838, 163.
DANA (Dr. S. L.) on determining the quantity of real indigo in the indigos of commerce, 1841, 49.
DANIELL (Prof.) on the natives of Old Calabar, Africa, 1845, 79.
DANSON (J. T.) on the fluctuations of the annual supply and average price of corn, in France, during the last seventy years, 1849, 87.
—— on the progress of emigration from the United Kingdom, 1849, 88.
—— on the current price and the cost price of corn in England during ten years (1843–1854), as illustrating the value of agricultural statistics, 1854, 134.
—— on the diversity of measures in the corn-markets of the United Kingdom, 1856, 137.
—— on the connexion between slavery in the United States of America and the cotton manufacture of the United Kingdom, 1856, 137.
—— on the Wirral peninsula, and the growth of its population in connexion with Liverpool and the Manchester district, 1856, 143.
—— on the ages of the population in Liverpool and Manchester, 1857, 158.
DANSON (W.) on the introduction of a species of Auchenia into Britain for obtaining wool, 1839, 92.
—— on the Alpaca, 1840, 131.
DARLING (W.) on the probable maximum depth of the ocean, 1855, 81.
DAUBENY (Dr.) on the connexion of hot springs with volcanos, 1831–32, 83.
*—— on an instrument to illustrate the effects of capillary attraction, 1831–32, 85.
—— on the geological inferences to be deduced from the chemical constitution of springs and of sea-water, 1831–32, 592.

DAUBENY (Dr.), specimen of an index to the flora of Oxfordshire exhibited by, 1831-32, 606.
—— on the action of light upon plants, 1833, 436; 1835, 73; 1853, 103.
—— on excretions from the roots of vegetables, 1834, 598.
—— on the volatilization of magnesia by heat, 1835, 51.
—— on the effects which arsenic produces on vegetation, 1836, 76.
—— on the chemical theory of volcanic phenomena, 1836, 81.
*——, instrument for drawing up water from great depths, 1836, 132.
—— on the climate of North America, 1838, 29.
—— on the geology and thermal springs of North America, 1833, 91.
—— on an apparatus for obtaining a numerical estimate of the intensity of solar light, 1839, 6.
—— on manures considered as stimulants to vegetation, 1841, 47.
—— on the disintegration of the dolomitic rocks of the Tyrol, 1841, 48.
——, notice of a portable botanical press, 1841, 77.
—— on the agricultural importance of ascertaining the minute portions of matter derived from organic sources that may be preserved in the surface-soil, and on the chemical means by which its presence may be detected, 1842, 37.
—— on the causes of the irregularities of surface which are observable in certain parts of the magnesian limestone formations of this country, 1842, 39.
—— on an irregular production of flowers in an aloe, 1842, 65.
—— on the phosphorite rock in Spanish Estremadura, 1844, 28.
—— on the chemical principles involved in the rotation of crops, 1845, 33.
—— on Cavendish's experiment respecting the production of nitric acid, 1846, 38.
—— on the rationale of certain practices employed in agriculture, 1846, 42.
——, new facts bearing on the chemical theory of volcanos, 1846, 45.
—— on the nutritive value of different kinds of food, 1847, 49.
—— experiments in vegetable physiology and agricultural chemistry in the Botanic Garden, Oxford, 1847, 82.
—— reply to an objection of Mr. Hopkins to the "chemical theory of volcanos," 1848, 67.
—— on an indirect method of ascertaining the presence of phosphoric acid in rocks, where the quantity of that ingredient was too minute to be determinable by direct analysis, 1855, 55.
—— on the action of light on the germination of seeds, 1855, 56.
*DAUBENY (Dr.) on the influence of light on the germination of plants, 1855, 103.
—— on a method of refining sugar, 1857, 45.
—— on the conversion of paper into parchment, 1857, 45.
*——, notice of several varieties of volcanic tufa from the neighbourhood of Rome and Naples, 1859, 68.
—— on certain volcanic rocks in Italy which appear to have been subjected to metamorphic action, 1859, 102.
—— on the elevation theory of volcanos, 1860, 75.
—— on the final causes of the sexuality of plants, in reference to Mr. Darwin's theory, 1860, 109.
——, experiments on equivocal generation, 1860, 115.
DAVIDOW (M.) on the theory of equilibrium of floating bodies, 1847, 1.
DAVIES (Mr.) on a machine for cutting the teeth of bevel wheels, 1839, 129.
*DAVIES (H. B.) on the Tasmanians, 1846, 117.
*DAVIES (J.) on the manufacture and purification of gases obtained from coal, 1842, 40.
*DAVIES (J. A.) on the decomposition of magnesian limestone at Brodsworth, 1854, 66.
DAVIES (T.) on the diurnal variation of the barometer, 1859, 50.
DAVIS (J. B.) on the forms of the crania of the ancient Britons, 1854, 127.
—— on the forms of the crania of the ancient Romans, 1855, 142.
—— on the forms of the crania of the Anglo-Saxons, 1856, 108.
—— on the inhabitants of the Tarai, at the foot of the Himalayas, 1859, 177.
DAVIS (Sir J. F.) on China, in reference to operations in that quarter, 1857, 129.
*DAVIS (J. H.) on the plants of the oolitic moorlands, 1858, 224.
DAVIS (R.) on a patent pan for evaporating saccharine solutions and other liquids at a temperature below 108° Fahr., 1859, 230.
DAVISON (R.) on a desiccating process, 1849, 114.
DAVISON (T.) on a reflecting telescope, 1833, 420.
DAVY (Prof. E.), experiments to prevent corrosion by sea-water, 1835, 34, 36.
—— on Irish and Virginian tobacco, 1835, 37.
—— on nicotin, 1835, 38.
—— on a new gaseous bicarburet of hydrogen, 1836, 62.
—— on a compound of carbon and potassium, or carburet of potassium, 1836, 63.
—— on a new gaseous compound of carbon and hydrogen, 1837, 50.

DAVY (Dr. J.) on the incrustation which forms in the boilers of steam-engines, 1850, 51.
—— on the fishes of the Lake District, 1858, 122.
——, observations on the Lake District, 1858, 149.
DAWES (J. S.) on the manufacture of iron, 1838, 68.
—— on the occurrence of vegetable remains, supposed to be marine, in the new red sandstone, 1842, 47.
DAWSON (Mr.), model of the great landslip at Axmouth, 1841, 64.
DAWSON (Dr. J. W.) on the fossils of the coal formation of Nova Scotia, 1855, 81.
—— on the species of Meriones and Arvicolæ found in Nova Scotia, 1855, 110.
*—— on the vegetable structure visible in the coal of Nova Scotia, 1858, 80.
—— on the occurrence of a land shell and reptiles in the South Joggins coal-field, Nova Scotia, 1859, 102.
DAY (W.) on the economical working of steam boilers and furnaces, 1854, 149.
DEAN (A.) on the discovery of gold ores in Merionethshire, 1844, 56.
—— on the stratification of igneous and sedimentary rocks of the lower Silurian formation in North Wales, 1844, 56.
DEANE (Sir T.) on the method adopted by his brother, Mr. A. Deane, to raise the 'Innisfaile' steam-vessel from the Cork river, 1843, 101.
—— on the construction of buildings for the accommodation of audiences, 1844, 99.
DE COLMAR'S (T.) arithmometer, or calculating machine, 1854, 1.
*DE LA BECHE (Sir H. T.) on the metalliferous veins of Cornwall, 1836, 83.
—— on that portion of the Ordnance geological map of England completely coloured, and on a section through the Silurian rocks in the vicinity of Builth, 1844, 46.
*—— on the geology of portions of South Wales, Gloucestershire, and Somersetshire, 1848, 79.
DE LA RIVE (Prof.) on an optical phenomenon observed at Mont Blanc, 1837, 10.
—— on the interference of electro-magnetic currents, 1837, 27.
*DE LA RUE (WARREN) on a new acetic ether occurring in a natural resin, 1860, 71.
*—— on the isomers of cumol, 1860, 71.
*DELESSE (ACHILLE) on the changes occasioned during the cooling of the granite of Mont Blanc, 1852, 43.
*DE MOLEYNS (Mr.) on recent discoveries in voltaic combination, 1841, 42.
—— on the nature and properties of ozone, 1841, 57.
DENHAM (Capt.) on the survey of the Mersey and the Dee, 1835, 64.
DENHAM (Capt.) on vibration of railways, 1835, 108.
—— on the tidal capacity of the Mersey estuary, &c., 1837, 85.
DENNIS (J. C.) on improvements in the reflecting circle, 1848, 117.
DENNIS (Rev. J. B. P.) on the mode of flight of the Pterodactyles of the coprolite bed near Cambridge, 1860, 76.
DENNISTOUN (J.) on a tissue spun by caterpillars, 1850, 123.
DENNY (H.) on the hatching and rearing a grey parrot in England, 1843, 71.
—— on the remains of the hippopotamus found in the Aire Valley deposit near Leeds, 1853, 51.
DENT (E. J.) on the application of a glass balance-spring to chronometers, 1833, 421.
—— on a chronometer with a glass balance-spring, 1834, 595.
—— on the effects of temperature on the regulators of time-keepers, and improvements in pendulums, 1838, 35.
——, experiment to determine the difference of longitude between Greenwich and New York, 1839, 27.
—— on the mean daily rate of the transit-clock in the Radcliffe observatory, Oxford, 1839, 28.
—— on a coating of gold to steel balance-springs of chronometers, 1841, 41.
—— on the longitude of Devonport, 1842, 9.
—— on the rate of protected chronometer springs, 1842, 9.
—— on a new chronometer compensating balance, 1842, 10.
—— on the rate of a patent compensating pendulum, 1842, 10.
*—— on the shape of the teeth of the wheels of the clock in the New Royal Exchange, 1844, 8.
—— on a new steering and azimuth compass, 1844, 12.
—— on a method of suspending a ship's compass, 1845, 16.
—— on a new portable azimuth compass, 1846, 25.
*DERRY (S.), report of patients of the Plymouth public dispensary, 1841, 83.
DE VRIJ (Dr.) on biliary concretions, 1847, 59.
—— on the analyses of the inorganic constituents of organic bodies, 1847, 59.
—— on the black colouring matter of the lungs, 1849, 36.
—— on solid and liquid camphor from the Dryobalanops camphora, 1851, 52.
—— on nitro-glycerine, 1851, 52.
DEWBAIN (Mr.), notice of the downy fruit of the black poplar, 1842, 64.
DIBB (J. E.) on registry of deeds in the West Riding of Yorkshire, 1858, 175.
DICK (D.) on the construction of achromatic object-glasses, 1834, 593.
DICK (Mr.) on the use of the omentum, 1834, 683.

*Dick (J.) on a new form of iron bottle for obtaining oxygen from peroxide of manganese, 1837, 58.
*Dickenson (Dr.) on the Normal School in Dublin, 1835, 125.
Dickie (Prof.) on the distribution of the marine algæ on the British and Irish coasts, with reference to the influence of the Gulf-stream, 1852, 65.
—— on a monstrosity of Bellis perennis, 1852, 66.
—— on the altitudinal ranges of plants in the north of Ireland, 1852, 66.
—— on the distribution and habits of Echinus lividus, 1852, 72.
—— on associations of colour and relations of colour and form in plants, 1854, 98.
——, remarks on the effects of the winter 1854–55 upon vegetation at Aberdeen, 1855, 105.
—— on the homologies of Lepismidæ, 1855, 110.
—— on the upper limits of cultivation in Aberdeenshire, 1859, 133.
—— on the flora of Aberdeenshire, 1859, 134.
—— on the mollusca of Aberdeenshire, 1859, 147.
—— on the structure of the shell in some species of Pecten, 1859, 147.
*Dickson (Sir D. J. H.) on extensive aneurism, 1836, 124.
—— on laceration of the rectus abdominis muscle, on a case of transposition of the cæcum, and on some cases of dropsy, 1837, 124.
—— on a remarkable case of rupture of the duodenum, 1839, 94.
—— on a case of albuminous ascites, with hydatids; on five cases of hepatic abscess, and on two cases of phthisis, 1841, 81.
—— on enormous hydropic distension of the abdomen, and on sudden death from the rupture of an aneurism of the thoracic aorta, 1842, 83.
Dieffenbach (Dr. E.) on mineral manure, 1845, 39.
—— on the geology of New Zealand, 1845, 50.
Dingle (Rev. J.) on a new case of binocular vision, 1858, 14.
—— on the configuration of the surface of the earth, 1858, 150.
—— on the constitution of the earth, 1859, 102.
—— on the corrugation of strata in the vicinity of mountain ranges, 1860, 77.
Dircks (H.) on a railway wheel with wood tire, 1840, 212.
—— on the production and prevention of smoke, 1843, 39.
—— on the construction of Luntley's shadowless burners, and the shape of glass chimneys for lamps, 1843, 98.
—— on the prevention of smoke from engine boilers and other furnaces, 1843, 98.
Dircks (H.) on the prevention of boiler explosions, 1854, 149.
—— on an apparatus for exhibiting optical illusions of spectral phenomena, 1858, 14.
*Dobson (Mr.), method of making bricks of any colour, 1838, 163.
Dobson (T.) on the causes of great inundations, 1856, 31.
—— on the Balaklava tempest, and the mode of interpreting barometrical fluctuations, 1856, 36.
*Dodds (J. W.) on improvements in iron and steel, and their application to railway and other purposes, 1857, 180.
Dollond (G.) on an atmospheric recorder, 1846, 17.
*Domville (W. C.) on some living aquatic birds at Santry House, near Dublin, 1853, 60.
Donaldson (Prof. J.) on the water sirene, 1850, 174.
Donnelly (Mr.) on the manner in which agricultural statistics are collected in Ireland, 1858, 176.
*Donohoe (Consul) on Pacific railway schemes, 1858, 149.
Donovan (M.) on a singular acoustic phenomenon, 1857, 22.
—— on a moveable horizontal sun-dial, which shows correct solar time within a fraction of a minute, 1857, 24.
*—— on hygrometers and hygrometry, 1857, 45.
Douglas (J.) on dislocation of the ankle-joint forward and backward, and on the reproduction of bone after the operation of trepan, 1840, 165.
Doull (A.) on a railway from the Atlantic to the Pacific in British North America, 1851, 111.
Dove (Prof.) on an apparatus for elliptically-polarized light, 1854, 9.
—— on some stereoscopic phenomena, 1854, 9.
—— on a method of measuring the absorption of polarized light in doubly refracting crystals, 1854, 10.
—— on the distribution of rain in the temperate zones, 1854, 28.
Dowden (R.) on a luminous appearance on the common marigold, 1843, 79.
*—— on the effect of light as a part of vital statistics, 1843, 96.
*—— on the heat and warmth of cottages, 1843, 96.
*—— on a compilation of the facts illustrating the physiology of vegetable and animal secretions, 1857, 110.
—— on a cash land-trade for Ireland, retail and wholesale, 1857, 160.
*—— on the effect of a rapid current of air, 1860, 39.
*—— on a plant poisoning a plant, 1860, 110.
*—— on local taxation for local purposes, 1860, 191.

*Dowling (Mr.), quantitative estimation of tannin in some tanning materials, 1859, 75.
*Draper (C. L.) on electro-magnetism, 1858, 25.
Draper (Prof. H.) on a change produced by exposure to the beams of the sun in the properties of an elementary substance, 1843, 9.
—— on the decomposition of carbonic acid gas, and the alkaline carbonates, by the light of the sun, 1843, 33.
—— on a reflecting telescope for celestial photography, erecting at Hastings, near New York, 1860, 63.
—— on the intellectual development of Europe, considered with reference to the views of Mr. Darwin and others, 1860, 115.
Dredge (Mr.), notice of a wire suspension bridge over the Avon, 1838, 163.
*—— on bridge architecture, 1839, 131.
*Dresser (Dr. C.) on abnormal forms of Passiflora carulea, 1860, 110.
*—— on the morphological laws in plants, 1860, 110.
Drew (Dr. J.) on the climate of Southampton, 1859, 29.
*Drummond (Rev. Dr.), Gordius aquaticus viviparous, 1835, 72.
Drummond (J.), outline of a theory of the structure and magnetic phenomena of the globe, 1857, 22.
—— on the intensity of the terrestrial magnetic force, 1858, 24.
—— on the development of a physical theory of terrestrial magnetism, 1858, 25.
Drummond (Capt. H. M.), list of birds found in Corfu and the Ionian Islands and Crete, 1843, 70.
Drury (Rev. T.) on the improvement of agricultural labourers, 1844, 90.
Duboscq (M.), notice of his apparatus for showing in projection on a screen all the phenomena of light, 1854, 10.
Du Boulay (M.) on the meteorological phenomena of the vernal equinoctial week, 1860, 39.
Ducane (Capt.) on the metamorphism of a species of crustacean, 1837, 98.
Duncan (J.) on geological phenomena in Africa, 1846, 69.
——, remarks during a journey from Whydah to Adafoodia, 1847, 119.
Duncan (J. F.) on a peculiar form of epidemic affecting the teeth and gums of young children, 1845, 82.
—— on the Shea butter-tree growing in Africa, 1846, 90.
Duncan (P.) on the nature of ciliary motion, 1853, 66.
Duncan (Dr.) on impregnation in phanerogamous plants, 1855, 106.
Dunn (J.) on a new klinometer and portable surveying instrument, 1834, 594.
Dunn (J.) on the vital statistics of Scarborough, 1840, 167.
Dunn (M.) on an improved working barrel for use in sinking pits, &c., 1840, 208.
*—— on Ponton's electro-magnetic telegraph, 1840, 213.
Du Noyer (G. V.) on the geological structure of the Dingle Promontory, co. Kerry, 1857, 70.
*—— on the geology of Lambay Island, 1857, 75.
—— on the junction of the mica slates and granite, Killiney Hill, Dublin, 1857, 84.
—— on the remains of early stone-built fortresses and habitations in the co. of Kerry, 1857, 148.
Dupin (Baron) on the price of grain, and its influence on the French population, 1836, 132.
——, notice of two maps of Britain, shaded to represent population and criminality, 1836, 133.
Duppa (B.) on a new organic compound containing boron, 1860, 69.
Dupré (Dr. A.) on the presence of copper in the tissues of plants and animals, 1857, 55.
—— on the composition of Thames water, 1859, 75.
*Durham (A. E.) on the nature of sleep, 1860, 129.
Dury (Rev. T.) on sea compasses, 1841, 27.
Dwerhagen (H. C.) on the navigation of the rivers Plata, Parana, Paraguay, Vermejo, and Pilcomayo, 1853, 73.
*Dyce (Dr.) on the identity of Morrhua vulgaris and M. punctata, hitherto described as distinct species, 1859, 265.

Earl (G. W.) on the progress of discovery in the western half of New Guinea, 1853, 76.
*Earl (W.) on Cambodia, 1851, 88.
Earle (H.) on the urethra, 1833, 460.
Earnshaw (Rev. S.) on the rings which surround the image of a star formed by the object-glass of a telescope, 1845, 10.
—— on the mathematical theory of sound, 1858, 34.
—— on the triplicity of sound, 1860, 58.
—— on the velocity of the sound of thunder, 1860, 58.
Ebelmen (M.) on artificial gems, 1849, 36.
Eddy (S.) on the Grassington lead-mines, 1844, 52.
*Edgar (Rev. Dr. J.) on the neglected and perishing classes, and the means of their reformation, 1852, 115.
*Edmonds (G.) on a philosophic universal language, 1855, 145.
Edmonds (R., jun.) on remarkable lunar periodicities in earthquakes, extraordinary oscillations of the sea, and great atmospherical changes, 1845, 20.
——, remarkable thermometrical maxima at or near the moon's first quarter, during twelve years, 1850, 32.

*Edwards (Mr.), notice of the fossils of Bracklestone Bay, Sussex, 1846, 67.
*Edwards (J.), electoral statistics of the British Empire, 1853, 107.
Edwards (Dr.) on collodion photographs of the moon's surface, 1854, 66.
Edwards (Dr. J. B.) on the titaniferous iron of the Mersey shore, 1855, 61.
—— on nitro-glycerine and other xyloids, 1858, 47.
*Egerton (Sir P. de M. G.) on an ichthyoid fossil from India, 1854, 82.
—— on the ichthyolites of Farnell Road, Forfarshire, 1860, 77.
—— on a new form of ichthyolite discovered by Mr. Peach, 1860, 78.
Ehrenberg (Prof.), notice of his microscopical discoveries, 1838, 116.
—— on the discovery of microscopic shells in the lower Silurian rocks, 1854, 82.
Elder (J.) on double cylinder expansion marine engines, 1858, 210.
—— on the engines of the 'Callao,' 'Lima,' and 'Bogota,' 1859, 231.
—— on the cylindrical spiral boiler, 1860, 204.
*Eldridge (J.) on a new washing machine, 1854, 149.
*Ellis (Rev. A. J.) on ethnical orthography, 1849, 85.
—— on a more general theory of analytical geometry, including the Cartesian as a particular case, 1855, 5.
—— on a universal alphabet with ordinary letters for the use of geographers, ethnologists, &c., 1855, 143.
Ellis (R. L.) on the cause of the instinctive tendency of bees to form hexagonal cells, 1858, 122.
Elton (Prof.) on the ante-Columbian discovery of America, 1848, 94.
Embleton (Dr. D.) on the anatomy of Scyllæa, 1847, 77.
—— on the anatomy of Doris, 1850, 124.
Ents (J S.) on the performance of steam-engines in Cornwall, 1836, 130.
—— on the connexion which exists between improvements in pit-work and the duty of steam-engines in Cornwall, 1841, 103.
*——, photographs of quarries near Penrhyn, showing the structure of granite, 1858, 80.
Erdmann (Prof. O. L.) on hæmatoxylin, the colouring principle of logwood, 1842, 33.
Erichsen (J. E.) on the influence of the coronary circulation on the heart's action, 1842, 78.
—— on the proximate cause of death after the spontaneous introduction of air into the veins, 1843, 83.
Erman (Prof. A.). contributions to a geological sketch of North Asia, 1842, 46.
Espy (J. P.) on storms, 1840, 30.
—— on the four daily fluctuations of the barometer, 1840, 55.
Estlin (J. B.) on the new (1838) vaccine virus, 1839, 105.
*Etheridge (R.) on the igneous rocks of Lundy and the Bristol district, 1856, 65.
Ettling (Dr.) on the identity of spiroilous and salicilous acid, 1840, 78.
Ettrick (W.) on the Davy lamp, 1835, 55.
—— on improvements in the astronomical clock, mariner's compass, and in steam-engines, 1835, 112.
—— on an instrument for observing minute changes of terrestrial magnetism, 1836, 33.
*——, new rubber for an electrical machine, 1836, 33.
—— on the common bellows blowpipe, 1836, 77.
*—— on the two electricities, and on Prof. Wheatstone's determination of the velocity of electric light, 1837, 28.
*—— on browning gun-barrels, 1837, 57.
—— on a new method of obtaining an artificial horizon at sea, 1837, 136.
Eugène de Menil (Baron) on a new safety-lamp, 1839, 64.
Evans (Mr.) on a case of spina bifida, 1839, 101.
*Evans (Mr.) on anthracite pig-iron, 1840, 191.
Evanson (Dr.) on the functions of the brain, 1837, 108.
*——, report of committee on the disease called "Morbus coxæ senilis," 1836, 124.
Everest (Col.) on the geodetical operations of India, 1844, 3.
—— on a barometer-pump, for filling barometer-tubes in vacuo, 1844, 24.
*—— on the measurement of two arcs of the meridian in India, 1845, 25.
Everett (Prof. J. D.) on a method of reducing observations of underground temperatures, 1859, 245.
Exley (Rev. T.) on facts obtained mathematically in chemistry, 1836, 50.
—— on the specific gravities of nitrogen, oxygen, hydrogen, and chlorine, and also of the vapours of carbon, sulphur, arsenic, and phosphorus, 1838, 64.
—— on chemical combinations, 1838, 68.
—— on the elementary constitution of organic substances, 1839, 58.
—— on the alternate spheres of attraction and repulsion, noticed by Newton, Boscovich, and others; and on chemical affinity, 1844, 39.
—— on the laws of chemical combinations and the volumes of gaseous bodies, 1848, 50.
—— on the motion of the electric fluid along conductors, 1848, 52.
—— on the cause of the transmission of electricity along conductors generally, and particularly as applied to the electric telegraph wires, 1853, 38.
*Eyre (Major V.) on the application of corrugated metal to ships, boats, and other floating bodies, 1856, 162.

*Etton (Mr.) on a vertical steam-engine, 1846, 113.
Etton (T. C.) on the arrangement of birds, 1858, 122.
—— on the oyster, 1858, 123.

Fairbairn (H.) on the changes in the climate of England, 1842, 26.
Fairbairn (W.) on the application of machinery to the manufacture of steam-engine boilers, and other vessels subject to pressure, 1838, 160.
—— on the effects of weights acting for an indefinite time upon bars of iron, 1839, 126.
—— on the fan-blast as applied to furnaces, 1840, 199.
—— on the strength of iron, and its application as a substitute for wood in shipbuilding, 1840, 201.
—— on raising water from low lands, 1840, 210.
*——, notice of Hall's hydraulic belt for raising water, 1840, 213.
—— on the combustion of coal, with a view to obtaining the greatest effect, and preventing the generation of smoke, 1842, 107.
*—— on the economy of the expansive action of steam in steam-engines, 1844, 98.
—— on railway gradients, 1845, 93.
——, experiments on the tubular bridge proposed by Mr. Stephenson for crossing the Menai Straits, 1846, 107.
—— on a wrought-iron tubular crane, 1850, 177.
—— on the construction of iron vessels exposed to severe strain, 1851, 113.
—— on the mechanical properties of metals, as derived from repeated meltings, 1852, 125.
—— on the tensile strength of unwrought iron plates at various temperatures, 1852, 125.
—— on a new tubular boiler, 1852, 125.
—— on the minie rifle, 1852, 125.
—— on the progress of mechanical science, 1853, 116.
—— on the density of various bodies when subjected to enormous compressing forces, 1854, 56.
—— on the consumption of fuel and the prevention of smoke, 1854, 149.
—— on the solidification of bodies under great pressure, 1854, 149.
*—— on the machinery of the Universal Exhibition of Paris, 1855, 206.
——, address as President of the Mechanical Section, on the progress of mechanical science, 1858, 201.
——, experimental researches to determine the density of steam at various temperatures, 1859, 233.
—— on the density of saturated steam, and on the law of expansion of superheated steam, 1860, 210.
*Falconer (Dr. H.) on some new additions among the mammalia to the fossil fauna of India, from Perim Island, in the Gulf of Cambay, 1845, 52.
Falconer (Dr. H.) on the fossil elephantine animals of India, 1845, 62.
—— on the crania of two species of crocodile from Sierra Leone, 1846, 79.
Faraday (Prof. M.) on electro-chemical decomposition, 1833, 393.
—— on the magnetic condition of matter, 1847, 20.
—— on three specimens of diamond which had been subjected to intense heat, 1847, 50.
—— on lightning conductors, 1854, 158.
——, notice of a specimen of dark glass, employed to darken the image of the sun, found to be melted after being placed outside the eyepiece of a telescope, 1851, 22.
Farquharson (Dr.) on the strongest form of sea-borne vessels, 1840, 191.
Farr's (Mr.) law of recovery and mortality in cholera, Dr. R. D. Thomson on, 1838, 126.
Farrar (Rev. A. S.) on the late eruption of Vesuvius, 1855, 55.
Fauvelle (M.), Rev. Dr. Buckland on the applicability of his mode of boring artesian wells to the well at Southampton, and to other wells, and to sinkings for coal, &c., 1846, 56.
—— on a new method of boring for artesian springs, 1846, 105.
Favre (Prof. A.) on circular chains in the Savoy Alps, 1860, 78.
Fawcett (H.) on the social and economical influence of the new gold, 1859, 205.
*—— on the method of political economy by Dr. Whewell, 1860, 191.
*—— on cooperative societies, their social and political aspect, 1860, 191.
*Faye (Dr.) on the action of some animal poisons, 1857, 110.
*Featherstonhaugh (G. H.) on the geography of New Brunswick, 1840, 121.
Featherstonhaugh (G. W.) on the excavation of the rocky channels of rivers by the recession of their cataracts, 1844. 45.
Felkin (W.) on the bobbin-net and hosiery trade, 1836, 148.
—— on the importance of an inquiry into the amount and appropriation of wages by the working classes, 1837, 148.
——, statistics of the working classes in Hyde, Cheshire, 1838, 172.
——, notice of an experiment on the growth of silk at Nottingham, 1839, 87.
—— on the growth of cotton, 1840, 146.
—— on the statistics of the machine-wrought hosiery trade, 1844, 91.
Fergusson (J.) on the site of the Holy Sepulchre at Jerusalem, 1854, 117.
*Ferrière (M.) on photographs upon albumen, 1854, 67.
Fielding (G. H.) on a new membrane in the eye, 1831–32, 602.

FIELDING (G. H.) on the peculiar atmospherical phenomena during the prevalence of influenza, 1833, 461.
FINCH (Dr. C.) on the diseases and causes of disability for military service in the Indian army, 1849, 89.
—— on the prevalence and mortality of cholera in the Indian armies, 1850, 161.
*—— on the vital statistics of the armies in the East India Company's service, 1851, 99.
FINDLATER (Mr.) on the state of crime in the suburban burgh of Anderston, 1840, 176.
FINDLAY (A. G.) on the currents of the Atlantic and Pacific oceans, 1853, 76.
—— on arctic and antarctic currents, and their connexion with the fate of Sir John Franklin, 1854, 117.
—— on some volcanic islets to the south-east of Japan, including the Bonin islands, 1856, 110.
*FINLAY (G.) on the origin of the modern Greeks, 1846, 117.
FISHER (Dr.) on the scrofulous tubercle, 1845, 82.
FISHER (Rev. G.) on the nature and origin of the aurora borealis, 1845, 22.
FISHER (Rev. J.) on remarkable rainbows, 1840, 12.
FISHER (J.) on an atmospheric washing machine, 1860, 210.
FISHER (Rev. J. M.) on the granite formations of Newabbey, in Galloway, 1840, 95.
FISON (Mrs. W.) on the importance of a colonial penny postage, 1858, 177.
FITTON (Dr.) on the arrangement and nomenclature of some of the subcretaceous strata, 1846, 58.
FITZROY (Admiral) on wind-charts of the Atlantic, compiled from Maury's pilot charts, 1855, 39.
——, notice of meteorological observations made at sea, 1857, 28.
—— on the probable migrations and variations of the earlier families of the human race, 1857, 130.
—— on the aqueous vapour of the atmosphere, 1859, 50.
—— on the atmospheric waves, 1859, 50.
*—— on meteorology, with reference to travelling, and the measurement of the height of mountains, 1859, 178.
—— on British storms, 1860, 39.
FITZWILLIAM (Earl) on statistical reports regarding agriculture, 1834, 693.
FLEMING (Dr. A.) on the rocks of the Upper Punjaub, 1853, 43.
FLEMING (Rev. F.), journey across the rivers of British Kaffraria, 1855, 147.
*FLETCHER (J.), statistical notices of the state of education in York, 1844, 91.
——, statistical and historical account of the ancient system of public charities in London, 1845, 88.
*FLETCHER (J.) on the system of colonization practised by the Irish Society, 1845, 91.
——, progress and character of popular education in England and Wales, 1848, 102.
——, moral and educational statistics of England and Wales, 1848, 105.
——, statistics of Brittany and the Bretons, 1848, 114.
——, statistics of the attendance in schools for children of the poorer classes, 1851, 99.
FOOT (F. J.) on the geology of the neighbourhood of Tralee, 1857, 65.
FORBES (D.) on the chemical examination of some alloys of copper and zinc, 1854, 67.
—— on the occurrence and chemical composition of some minerals from the south of Norway, 1854, 67.
—— on the action of sulphurets on metallic silicates at high temperatures, 1855, 62.
—— on the relations of the Silurian and metamorphic rocks of the south of Norway, 1855, 82.
*FORBES (Prof. E.), notice of Testacea new to Scotland, 1836, 99.
—— on new and rare British plants and animals, 1837, 102.
*——, two specimens of the lancelot taken off the Isle of Man, 1838, 110.
—— on the distribution of the terrestrial Pulmonifera in Europe, 1838, 112.
——, zoological researches in Orkney and Shetland, 1839, 79.
—— on the Ciliograda of the British seas, 1839, 85; 1840, 141.
—— on a pleistocene tract in the Isle of Man, and the relation of its fauna to that of the neighbouring sea, 1840, 104.
—— on Pelonaia, a new genus of ascidian mollusca, 1840, 137.
—— on two remarkable marine invertebrata inhabiting the Ægean Sea, 1841, 72.
—— on the addition of the order Nucleobranchia to the British molluscous fauna, 1843, 72.
—— on some living animals taken off the coast of Cork, 1843, 74.
*——, notice of a map of Lycia by Lieut. Spratt, 1843, 64.
—— on the tertiary and cretaceous formations of the Isle of Wight, 1844, 43.
——, dredging-operations on the coast of Anglesea by, 1844, 63.
—— on some animals new to the British seas, 1844, 64.
—— on the morphology of the reproductive system of Sertularian zoophytes, and its analogy with that of flowering plants, 1844, 68.
—— on a remarkable phenomenon presented by the fossils in the freshwater tertiary of the island of Cos, 1845, 59.

FORBES (Prof. E.) on preserving the Medusæ, &c., 1845, 65.
—— on additions to the marine fauna of Britain, 1845, 66.
—— on the distribution of endemic plants, more especially those of the British Islands, considered with regard to geological changes, 1845, 67.
—— on natural-history observations bearing upon geology, 1846, 69.
——, Crustacea found in cruises round the British coast, 1846, 80.
—— on the pulmograde Medusæ of the British seas, 1846, 84.
—— on the families of British Lamellibranchiate mollusca, 1847, 75.
—— on dredging-researches, 1847, 77.
——, notice of discoveries among the British Cystideæ, 1848, 68.
*—— on some marine animals from the Bristol Channel, 1848, 125.
—— on the varieties of the wild carrot, 1849, 70.
—— on a remarkable monstrosity of a Vinca, 1849, 70.
—— on the genera of British Patellacea, 1849, 75.
—— on Beroë cucumis, and the genera or species of Ciliograda which have been founded upon it, 1849, 76.
—— on the succession of strata and distribution of organic remains in the Dorsetshire Purbecks, 1850, 79.
—— on the European species of Echinus, and the peculiarities of their distribution, 1850, 123.
—— on the discovery by Dr. Overweg of Devonian rocks in North Africa, 1851, 58.
—— on the Echinodermata of the crag, 1851, 58.
—— on the new species of Maclurea, 1851, 65.
—— on some indications of the molluscous fauna of the Azores and St. Helena, 1851, 76.
—— on a new testacean, 1851, 77.
—— on the fossils of the yellow sandstone of the south of Ireland, 1852, 43.
—— on a new map of the geological distribution of marine life, and on the homoiozoic belts, 1852, 73.
—— on a species of Sepiola new to Britain, and first procured in the neighbourhood of Belfast, 1852, 73.
—— on the foliation of some metamorphic rocks in Scotland, 1854, 82.
—— on some points connected with the natural history of the Azores, 1854, 108.
FORBES (Col. J.) on the ethnology and hieroglyphics of the Caledonians, 1859, 178.
FORBES (Prof. J. D.) on the horary oscillations of the barometer near Edinburgh, 1831–32, 86.
*——, notice of a register of observations of the thermometer kept in Scotland, 1831–32, 581.
*FORBES (Prof. J. D.) on an improved portable barometer, 1831–32, 581.
——, results obtained on the diminution of the intensity of the solar rays in traversing the atmosphere, by means of the actinometer, 1833, 380.
—— on a new sympiesometer, 1834, 593.
—— on terrestrial magnetic intensity, especially in relation to the influence of height, 1836, 30.
—— on the weight, height and strength of men, 1836, 38.
—— on the physical geography of the Pyrenees, particularly in relation to hot springs, 1836, 83.
——, proceedings of the Meteorological Committee, 1837, 37.
—— on a brine-spring emitting carbonic acid gas, 1838, 28.
—— on the use of mica in polarizing light, 1839, 6.
—— on excessive falls of rain, 1840, 43.
——, an attempt to establish the plastic nature of glacier ice by direct experiment, 1844, 24.
—— on the temperature of the earth at Trevandrum, from the observations of John Caldecott, 1847, 40.
—— on the alleged evidence for a physical connexion between stars forming binary or multiple groups, deduced from the doctrine of chances, 1850, 23.
—— on the progress of experiments on the conduction of heat, 1851, 7.
FORBES (Sir JOHN S.) on popular investments, 1859, 209.
FORBES (Dr.) on the mean apsidal angle of the moon's orbit, 1840, 1.
FORCHHAMMER (Prof.) on sea-water, and the effects of variation in its currents, 1846, 51.
—— on the formation of dolomite, 1849, 36.
—— on a new method of ascertaining the quantity of organic matter in water, 1849, 37.
*FORDE and GISBORNE (Messrs.), survey for a ship-canal through the isthmus of Central America, 1852, 110.
*FORSTER (Dr.) on meteors, 1848, 8.
FORSTER (J. A.) on improvements in organ machinery, 1853, 117.
FOSTER (G. C.) on a more systematic nomenclature for organic bodies, 1857, 45.
FOSTER (Dr. M.) on the beat of the snail's heart, 1859, 160.
*—— on the theory of cardiac inhibition, 1860, 129.
FOUCAULT (L.), nouvelles expériences sur le mouvement de la terre au moyen du gyroscope, 1854, 56.
—— on the heat produced by the influence of the magnet upon bodies in motion, 1855, 11.

FOUCAULT (L.) on a new polarizer, resulting from a modification of the prism of Nicol, 1857, 5.
—— on a telescope speculum of silvered glass, 1857, 6.
*FOULLE (Dr. A.) on the anatomy and functions of the third, sixth, and seventh pairs of nerves and the medulla oblongata, 1858, 134.
*FOURNESS (Mr.) on coal-mine ventilation, 1838, 163.
FOVILLE (Dr.) on the anatomy of the brain, 1839, 97.
FOWLER'S (Mr.) new calculating machine, notice of, 1840, 55.
—— on a new calculating machine, 1841, 39.
FOWLER (Dr. N.) on the functions of the fifth pair of nerves, and of the ganglia, &c., 1840, 156.
FOWLER (Dr. R.) on a case of deafness, dumbness, and blindness, with remarks on the muscular sense, 1841, 81.
—— on the best mode of expressing the results of practice in therapeutics, 1842, 83.
—— on a young woman deaf, dumb, and blind, 1842, 83.
——, additional facts relative to the case of a blind and deaf mute, 1844, 85.
—— on the state of the deaf and dumb, 1845, 85.
—— on the relations of sensation to the higher mental processes, 1846, 92.
—— on the blind and deaf and dumb, 1847, 92.
*—— on two pony foals in some points resembling stags, 1847, 93.
——, a physiological explanation how persons both blind, deaf, and dumb interpret the communications of others by their touch only, 1848, 88.
——, if vitality be a force having correlations with the forces, chemical affinities, motion, heat, light, electricity, magnetism, gravity, so ably shown by Prof. Grove to be modifications of one and the same force?, 1849, 77.
—— on the influences of man's instinct on his intellectual and moral powers, 1850, 130.
—— on the correlation of vitality and mind with the physical forces, 1851, 83.
—— on the state of the mind during sleep, 1852, 80.
—— on the influence of the circulation of the blood on the mental functions, 1853, 66.
—— on literary and philosophical pursuits as conducive to longevity, 1854, 114.
——, an attempt to solve some of the difficulties of the Berkleyan controversy by well-ascertained physiological and psychological facts, 1855, 123.
—— on the sensational, emotional, intellectual, and instinctive capacities of the lower animals compared with those of man, 1858, 134.
FOWLER (Dr. R.), a second physiological attempt to unravel some of the perplexities of the Berkleyan hypothesis, 1859, 160.
FOWLER (R. J.) on the estimation of actinism, 1858, 47.
FOWNES (G.) on the direct formation of cyanogen from its elements, 1841, 52.
FOX (Mr.) on the punishment of death in Prussia, 1835, 124.
FOX (G. T.), account of the remains of a whale recently discovered at Durham, 1839, 89; 1840, 131.
*FOX (J. J.) on the province of the statistician, 1860, 191.
FOX (R. W.), experiments on the electricity of the copper vein in Huel Jewel mine, 1834, 572.
*—— on a new dipping-needle, 1835, 25.
—— on the absence of magnetism in cast iron when in fusion, 1835, 33.
—— on voltaic agencies in metalliferous veins, 1836, 81.
—— on the production of a horizontal vein of carbonate of zinc, 1838, 90.
FRANKLAND (Prof.) on some organic compounds containing metals, 1855, 62.
—— on a mode of conserving the alkaline sulphates contained in alums, 1855, 62.
—— on a new organic compound containing boron, 1860, 69.
FRANKLIN (J. A.) on decimal coinage and accounts, showing the impracticability of the franc or tenpenny unit, 1854, 135.
*FREEMAN (Rev. J.) on the inhabitants of Prince's Island, 1846, 117.
*FREEMAN (Consul S.), description of Ghadamès, 1859, 178.
FRÉMY (Prof. E.) on the extraction of metals from the ore of platinum, 1853, 63.
FREUND (Dr. W.) on the Etruscan question, 1854, 126.
FRIPP (C. B.) on popular education in Bristol, 1836, 136.
—— on the condition of the poor of Bristol, 1837, 139.
—— on the condition of the working classes in Bristol, 1839, 121.
—— on the statistics of education in Bristol, 1841, 89.
FRITH (G. H.) on macadamized roads, 1857, 180.
FRODSHAM (W. J.) on a comparative pendulum, 1839, 24.
FRÖLICH (Count D.) on the principles which regulate the effects of a convertible paper currency, 1855, 165.
FROUDE (W.) on Giffard's injector for feeding boilers, 1860, 211.
*FUENTE (B. La) on the province of Tarapaca, South Peru, 1853, 88.
FULBROOK (C.) on the variation in the quantity of rain due to the moon's position in

reference to the plane of the earth's orbit, 1857, 29.
*Fulton (J.) on the application (for economic and sanitary objects) of the principle of "vivaria" to agriculture and other purposes of life, 1855, 111.
*Furlong (C. H.), notice of a collection of ferns from Portugal, 1855, 106.

Gabriel (Consul E.), dispatch to Lord Clarendon announcing the arrival of Dr. Livingstone at Loanda, 1854, 119.
Gages (A.) on some arseniates of ammonia, 1857, 47.
—— on the specific gravity of chloride of nitrogen, with some remarks upon its action on alcohol, 1857, 47.
—— on a method of observation applied to the study of some metamorphic rocks, and on some molecular changes exhibited by the action of acids upon them, 1858, 48.
—— on a new variety of pyro-electric Wavellite, 1858, 49.
—— on the comparative action of hydrocyanic acid on albumen and caseine, 1859, 162.
—— on some transformations of iron pyrites in connexion with organic remains, 1860, 79.
Gairdner (Dr. W. T.) on pathological cell-development, 1850, 131.
—— on the mortality from certain diseases, 1857, 110.
—— on the action of the auriculo-ventricular valves of the heart, 1857, 110.
Gale (P.) on decimal arrangement of land-measures, 1855, 165.
*Gale (Capt. S.) on the shortest routes to South Australia, 1854, 120.
Galen (Dr. von) on the comet of short period discovered by Brorsen, Feb. 26, 1846, and its reappearance in 1851, 1851, 23.
Galitzin (Prince Ern.) on the manners and customs of the Yacoutes, 1853, 80.
Gall (J., jun.) on improved monographic projections of the world, 1855, 148.
—— on the mutual influence of capillary attraction and motion on projectiles, and its application to the construction of a new kind of rifle shells, and balls to be thrown from common guns, 1855, 206.
*Galletley (J.) on a new glucocide contained in the petals of a wallflower, 1855, 63.
Galloway (R.) on the quality of food of artisans in an artificially heated atmosphere, 1855, 63.
—— on the use of phosphate of potash in a salt-meat dietary, 1855, 63.
*Galton (F.), expedition to the east of Walfisch Bay under, 1852, 110.
—— on a hand heliostat for the purpose of flashing sun signals, 1858, 15.
Garden (Capt.) on the occurrence of a true cretaceous formation in the south of Africa, 1854, 83.
Gardner (G.) on the internal structure of the palm tribe, 1837, 102.
—— on the geology and fossil fishes of North Brazil, 1840, 118.
Gardner (Mr.) on the industrial and training school to be erected near Manchester, 1842, 96.
Garner (R.) on an economical use of the granitic sandstone of North Staffordshire, 1839, 77.
——, observations on Beroë pileus, 1839, 93.
—— on a remarkable hail-storm in North Staffordshire, 1856, 39.
—— on the pearls of the Conway River, N. Wales, with observations on the natural productions of the neighbouring coast, 1856, 92.
—— on the anatomy of the brain in some small quadrupeds, 1858, 123.
—— on the coal strata of North Staffordshire, with reference particularly to their organic remains, 1859, 103.
—— on reproduction in Gasteropoda, and on some curious effects of endosmosis, 1859, 162.
—— on certain alterations in the medulla oblongata in cases of paralysis, 1860, 129.
—— on the structure of the Lepadidæ, 1860, 130.
Garnett (J.) on a new day and night telegraph, 1838, 159.
Garrett (R.) on improvements made in the harbour of Belfast, 1852, 126.
Garrod (Dr. A. B.), the specific, chemical, and microscopical phenomena of gouty inflammation, 1859, 165.
*Gartland (W.) on criteria for real and imaginary roots of biquadratic equations, 1852, 2.
Gaskell (D.) on the want of educational establishments adapted to persons of a feeble or imperfect mental organization, 1847, 97.
Gaskoin (Mr.), pathological collection of shells, 1860, 116.
*Gason (Dr. J.), climatological notes on Pisa and Lucca, 1852, 110.
*Gassiot (J. P.), repetition of experiment on the production of electricity without contact, 1844, 39.
—— on the electricity of tension in the voltaic battery, 1846, 47.
—— on a peculiar form produced in a diamond when under the influence of the voltaic arc, 1850, 53.
—— on the decomposition of water under pressure, by the galvanic battery, 1853, 39.
—— on the heating effects of secondary currents, 1854, 68.
—— on induced electrical discharges taken in aqueous vapour, 1858, 25.
—— on the phosphorescent appearance of

electrical discharges in a vacuum made in flint and potash glass, 1858, 26.
GASSIOT (J. P.) on electrical discharges as observed in highly rarefied carbonic acid in contact with potash, 1858, 50.
—— on the stratified electrical discharge, as affected by a moveable glass ball, 1859, 11.
GASTALDI (B.), parallel between the superficial deposits of the basin of Switzerland and those of the valley of the Po in Piedmont, 1850, 90.
GAZARI (Prof.) on a method of detecting the traces of writing which has been fraudulently erased, 1831–32, 90.
*GEARY (S.) on a new method of forming fuel, 1839, 132.
GEIKIE (A.) on the chronology of the trap rocks of Scotland, 1859, 106.
GEINITZ (Dr.) on the Silurian formation in the district of Wilsdruff, 1860, 79.
*—— on snow-crystals, 1860, 79.
GELDART (Rev. G. C.), language no test of race, 1858, 150.
*GEMMEL (Rev. J.) on the deciphering of inscriptions on two seals, found by Mr. Layard at Koyunjik, 1855, 145.
GEOGHEGAN (Prof.) on a method of testing the presence of muriatic acid in hydrocyanic acid, 1835, 45.
*GERARD (A.), experimental illustration of the gyroscope, 1859, 235.
GIBB (A.) on the granite quarries of Aberdeen and Kincardineshire, 1859, 235.
GIBB (Dr. G. D.) on Canadian caverns, 1859, 106.
—— on saccharine fermentation within the female breast, 1860, 131.
GIBBES (Sir G.) on the constitution of matter, 1844, 41.
GIBSON (Mr.) on a machine intended to prevent accidents in mines, 1854, 150.
GIBSON (W. S.) on some basaltic formations in Northumberland, 1859, 106.
GILBART (J. W.) on the laws of the currency in Ireland, 1852, 115.
—— on the laws of the currency, as exemplified in the circulation of country bank notes in England since the passing of the Act of 1844, 1854, 136.
—— on the laws of the currency in Scotland, 1855, 166.
—— on the family principle in London banking, 1856, 143.
GILBERT (Mrs. DAVIES) on small allotments and spade husbandry, 1841, 98.
—— on the advantages arising from spade husbandry and agricultural education, 1842, 99.
*—— on the progress of the Willingdon Agricultural School, 1843, 94.
—— on agricultural schools near Eastbourne, 1844, 87.
GILBERT (Dr. J. H.) on agricultural chemistry, especially in relation to the mineral theory of Baron Liebig, 1851, 45.
*GILBERT (Dr. J. H.) on the equivalency of starch and sugar in food, 1854, 70.
—— on the amounts of, and methods of estimating, ammonia and nitric acid in rain-water, 1854, 70, 164.
—— on some points connected with agricultural chemistry, 1856, 172.
—— on the composition of wheat grain, and its products, 1856, 173.
—— on the assimilation of nitrogen by plants, 1857, 51.
—— on the annual yield of nitrogen per acre in different crops, 1858, 52.
—— on the effects of different manures on the composition of the mixed herbage of meadow-land, 1859, 70.
*—— on the composition of the ash of wheat, 1860, 70.
GILBERTSON (W.) on marine shells of recent species at considerable elevations near Preston, 1834, 654.
GILES (J. V.), description of a Samoied family seen at Archangel, 1852, 84.
*GILL (E. W.) on naval architecture, 1831–32, 608.
*GISBORNE and FORDE (Messrs.) on a ship canal through the isthmus of Central America, 1852, 110.
GLADSTONE (G.) on a remarkable deposit of carbonate of lime about fossils in the lower lias of Dorsetshire, 1858, 51.
GLADSTONE (Dr. J. H. and Mr. G.) on the growth of plants in abnormal atmospheres, 1850, 54.
GLADSTONE (Dr. J. H.) on the compounds of the halogens with phosphorus, 1849, 38.
—— on a sample of blood containing fat, 1851, 77.
—— on the spontaneous decomposition of xyloidine, 1853, 41.
—— on the corrosion of iron-built ships by sugar cargoes, 1853, 41.
—— on a method of analysis applicable to the quantitative estimation of nitric and acetic acids, 1854, 68.
*—— on the fluorescence exhibited by certain iron and platinum salts, 1854, 68.
—— on a crystalline deposit of gypsum in the reservoir of the Highgate waterworks, 1855, 63.
—— on the colour of salts in solution, each constituent of which is coloured, 1857, 8.
—— on the effects of heat on the colour of dissolved salts, 1857, 8.
—— on explosive potassium, 1857, 47; on froth, 48.
—— on the use of the prism in detecting impurities, 1857, 48.
—— on the decomposition by heat of certain ammoniacal salts, 1857, 48.
—— on fossils from the coast of Barbary, 1857, 67.
—— on some optical properties of phosphorus, 1858, 15.

GLADSTONE (Dr. J. H.) on the fixed lines of the solar spectrum, 1858, 17.
—— on reciprocal decomposition between salts and their acid solvents, 1858, 50.
—— on the relation between refractive index and volume among liquids, 1859, 12.
—— on the fluorescence and phosphorescence of diamonds, 1859, 69.
—— on photographs of fluorescent substances, 1859, 69.
—— on his own perception of colours, 1860, 12.
—— on the chromatic properties of the electric light of mercury, 1860, 13.
——, chemical notes, 1860, 69.
GLADSTONE (T. M.) on malleable iron for beams or girders, 1852, 126.
GLAISHER (J.), photogenic drawings of snow crystals, 1854, 30.
GLENNIE (J. S. S.) on a general mechanical theory of physics, 1859, 58.
—— on physics as a branch of the science of motion, 1860, 56.
—— on a general law of rotation applied to the planets, 1860, 58.
*GLOVER (G.) on foreign bodies in the œsophagus, 1840, 155.
GLOVER (R. M.) on the functions of the rete mucosum and pigmentum nigrum, in the dark races of mankind, 1838, 125.
GLOVER (Dr. R. W.) on preparing hydrobromic and hydriodic acids, 1840, 75.
—— on the physiological and medicinal action of bromine and its compounds, 1840, 157.
GLYDE (J., jun.) on the localities of crime in Suffolk, 1855, 167.
GLYNN (J.) on the waterworks of Newcastle-upon-Tyne, 1838, 164.
—— on the application of steam power to the drainage of marshes and fen lands, 1848, 117.
—— on the economy of water power, 1858, 212
GOADBY (A.) on the conservation of substances, 1844, 69.
—— on Fizeau's process of etching Daguerreotype plates, and its application to objects of natural history, 1845, 76.
GODDARD (J. F.) on the use of the oxyhydrogen microscope in exhibiting the phenomena of polarization, 1839, 8.
GODDARD (J. T.) on an improved anemometer, 1844, 23.
*—— on a new anemometer, 1845, 18.
GODWIN (J.) on an improved cast-iron sleeper for railways, 1852, 127.
GODWIN-AUSTEN (ROBERT A. C.) on geological evidence and inferences, 1838, 93.
—— on the organic remains of the limestones and slates of South Devon, 1839, 69.
—— on the geology of the Channel Islands, 1849, 49.
—— on some changes in the male flowers of forty days' maize, 1849, 68.
GODWIN-AUSTEN (ROBERT A. C.) on a series of morphological changes observed in Trifolium repens, 1849, 68.
—— on recent changes of sea-level, 1850, 71.
—— on the occurrence of a boulder of granite in the white chalk of the south-east of England, 1857, 62.
*GOLD (Col. C.) on telegraphic or signal communications in foggy weather, &c., 1837, 38.
GOOCH (T. L.), account of a toad found alive imbedded in a mass of new red sandstone, 1835, 72.
GOODMAN (J.) on the theory of magnetism, 1842, 17.
—— on the cause of dissimilarity of the voltaic and ordinary electricities, 1842, 18.
—— on the analogy of the existences or forces, light, heat, voltaic and ordinary electricities, 1844, 11.
—— on a voltaic battery of the highest powers in which potassium forms the positive element, 1847, 50.
—— on the physiological condition of the blood in erysipelas, and probably in some other cases of inflammation, 1847, 94.
—— on the identity of the existences or forces of light, heat, electricity, magnetism, and gravitation, 1848, 53.
GOODSIR (HARRY D. S.) on the structure and development of the cystic entozoa, 1844, 67.
—— on the reproduction of lost parts in the Crustacea, 1844, 68.
—— on the organs of generation in the decapodous Crustacea, 1844, 69.
GOODSIR (Prof. J.) on the human teeth, 1838, 121.
—— zoological researches in Orkney and Shetland, 1839, 79.
—— on the follicular stage of dentition in the ruminants and other orders of mammalia, 1839, 82.
—— on the Ciliograda of the British seas, 1839, 85; 1840, 141.
—— on Pelonaia, a new genus of ascidian mollusca, 1840, 137.
*—— on the morphological constitution of limbs, 1856, 93.
*—— on the morphological constitution of the skeleton of the vertebrate head, 1856, 93.
*—— on the morphological relations of the nervous system in the annulose and vertebrate types of organization, 1856, 93.
GÖPPERT (Prof.), tabular view of fossil plants, 1845, 48.
—— on the origin of the coal of Silesia, 1846, 50.
GÖPPING (Dr.) on the formation of coal, &c., 1847, 66.
GORDON (A.) on the polyzonal lens, 1834, 595.
GORDON (Mr.) on the 'New Statistical Account of Scotland,' 1834, 692.

*Gordon (Mr.), anatomical model of the human body, carved in ivory, 1836, 125.
Gordon (Prof.) on the turbine water-wheel, 1840, 191.
*Gore (G.), apparatus showing the correlation of forces, and heating effects, by mechanical operations, on a peculiar form of antimony, 1858, 26.
Gorman (W.) on a momentum engine, 1855, 206.
—— on a pressure water-meter, 1855, 207.
Gossage (Mr.) on a new rotatory steam-engine, 1839, 129.
Gould (J.) on the Trogonidæ, 1837, 97.
——, a monograph of the subfamily Odontophorinæ, or partridges of America, 1844, 61.
*——, notice of new species of humming-birds from the Andes, 1846, 79.
—— on a new species of Cometes, a genus of humming-birds, 1853, 68.
—— on new pheasants introduced into England, 1859, 148.
——, notice of several species of birds of paradise, 1859, 148.
*—— on some new species of birds, 1859, 149.
Gower (Mr.) on the boiler of the steam-packet 'Vesta,' the bottom of which is covered with mercury, 1836, 131.
Graham (A.) on Donati's comet, 1858, 28.
*Graham (Mr.) on a method of approximating to the value of the roots of numerical equations, 1840, 54.
Graham (Thomas) on the theory of the voltaic circle, 1839, 29.
—— on hydrated salts and metallic peroxides, and on the doctrine of isomerism, 1834, 579.
—— on certain compounds with water, 1835, 45.
—— on safety-lamps, 1835, 56.
*—— on some thermo-chemical researches, 1842, 40.
—— on a new property of gases, 1845, 28.
—— on liquid diffusion, 1851, 47.
—— on the principle of the endosmose of liquids, 1852, 36.
—— on the concentration of alcohol in Sömmering's experiments, 1854, 69.
*—— on the molecular movements of fluids, 1859, 259.
Grainger (J.) on the shells found in the alluvial deposits of Belfast, 1852, 43.
Grantham (J.) on a plan of disengaging and reconnecting the paddle-wheels of steam-engines, 1841, 102.
—— on Cunningham's plan for reefing topsails, 1854, 150.
—— on Fisher's Venetian screw-propeller, 1854, 151.
—— on a high-level railway for the Liverpool docks, 1854, 151.
Granville (Dr.) on an improved stethoscope, 1838, 129.
*Grattan (J.) on some skulls discovered in an ancient sepulchral mound near Mount Wilson in King's County, Ireland, 1857, 131.
Grattan (J.), notes upon a collection of Irish crania, 1852, 84.
Graves (Rev. Prof. C.) on triplets, 1845, 2.
*Graves (Rev. Prof.) on the interpretation of certain symbolic formulæ and extensions of Taylor's theorem, 1857, 3.
—— on the progress made in the transcription and translation of the ancient laws of Ireland, called the Brehon laws, 1857, 131.
—— on the identification of the river Dur, mentioned by Ptolemy in his description of Ireland, with the Kenmare river, 1857, 132.
*—— on the arrangement of the forts and dwelling-places of the ancient Irish, 1860, 156.
Graves (C.) on a general geometric method, 1838, 1.
Graves (J. T.) on the theory of exponential functions, 1834, 523.
—— on the polyhedron of forces, 1856, 1.
—— on the congruence $na \equiv n+1 \pmod{p}$, 1856, 1.
Graves (Dr. R. J.) on the use of chloride of soda in fever, 1835, 104.
Gravier (Coulvier) on shooting-stars, 1845, 20.
*Gray (Sir C.) on Asiatic cholera, 1860, 132.
Gray (J.) on the causes of the great Versailles railway accident, 1844, 97.
*—— on iron bars, 1844, 98.
Gray (Mr.) on a mechanically adjusted compass, 1854, 151.
Gray (Dr. J. E.), notice of some rare and interesting mammalia in the Royal Institution, Liverpool, 1837, 99.
——, notice of new land shells in the Royal Institution, Liverpool, 1837, 100.
——, notice of Sir R. Schomburgk's discovery of the Victoria regina, 1837, 100.
—— on the angular lines on shells of certain mollusca, 1838, 111.
—— on Neara, a new British shell, 1838, 110.
—— on the boring of Pholades, 1838, 111.
—— on the wombat, 1838, 111.
—— on the geographical distribution of the animals of New Holland, 1841, 68.
—— on a new glirine animal from Mexico, 1841, 70.
Gray (Dr.) on a new railway signal, 1857, 185.
Gray (W.), report of experiments on the quantities of rain falling at different elevations, at York, 1833, 401.
——, second report on the quantities of rain falling at different elevations above the surface of the ground at York, 1834, 560.
—— on a concentric iris, as seen from the ridge of Snowdon, 1853, 26.

GREEN (B.) on an improved principle in the construction of timber bridges, 1838, 150.
*GREEN (Dr.) on Nasmyth's steam pile-driver, 1844, 98.
*GREENE (Dr.) on a property of alcohol, 1847, 57.
GREENE (Prof. J. R.) on British naked-eyed Medusæ, with notices of seven undescribed forms, 1857, 103.
—— on embryology, with reference to the mutual relations of the subkingdoms of animals, 1860, 132.
*GREENE (Dr. R.) on polishing the specula of telescopes, 1843, 11.
—— on Nasmyth's steam-hammer for pile-driving, 1845, 92.
—— on a portable equatorial stand for telescopes without polar axis, 1846, 8.
—— on a machine for polishing specula, 1855, 11.
—— on a machine for polishing specula for reflecting telescopes and lenses, 1856, 24.
*—— on a new railway break, invented by M. Sisco, of Paris, 1856, 162.
*—— on a method of uniting iron with iron or other metals without welding, invented by M. Sisco, of Paris, 1856, 162.
GREENER (W.) on the construction of steam-boilers, 1838, 162.
—— on the manufacture of the finer irons and steels as applied to gun-barrels, swords, and railway axles, 1849, 115.
GREENHOW (H. M.) on the people of Oude, and on their leading characteristics, 1858, 151.
GREENHOW (T. M.) on the beneficial effects of mercurial action rapidly induced, 1838, 124.
—— on a sling bed for the treatment of fractures, 1838, 130.
—— on an air-duct to be used in glass furnaces for the prevention of smoke, 1844, 35.
GREENOCK (Lord) on the coal-fields of Scotland, 1834, 639.
*——, notice of the discovery of lead on the borders of Galloway and Ayrshire, 1840, 97.
GREENOUGH (G. B.) on the geology of India, 1854, 83.
GREEVES (A. F. A.) on the gyration of the heart, 1836, 120.
GREG (R. P.) on meteorolites and asteroids, 1854, 19.
GREG (W. R.) on the social statistics of the Netherlands, 1835, 125.
—— on statistical desiderata, 1836, 151.
—— on the state of the working classes in Rutlandshire, 1839, 112.
GREGORY (Prof. W.), abstract of Dr. Reichenbach's discoveries in destructive distillation, 1834, 591.
——, notice of Prof. Liebig's new process for preparing murexide, 1840, 74.
GREGORY (Prof. W.) on the preparation of alloxan, alloxantine, thionurate of ammonia, uramile, and murexide, 1840, 74.
—— on the pre-existence of urea in uric acid, 1840, 73.
—— on the sulphite of lead, 1850, 55.
—— on new forms of Diatomaceæ from the Firth of Clyde, 1856, 83.
*GRELLET (Mr.) on an instrument for drawing circles in perspective, 1841, 42.
GREWE (J. H.), experiment with the thermometer on the mountain Storvandofjeld, 1844, 27.
——, observations of the aurora borealis during the year 1845, at Alten, 1846, 12.
——, meteorological observations made at Alten, 1846, 12; 1848, 32.
—— meteorological observations made at Kaafjord, in Western Finmark, 1849, 18; 1850, 36.
*GREY (Sir C.) on the longitude, 1859, 34.
GRIFFIN (J. J.) on a new method of crystallographic notation, 1840, 88.
GRIFFITH (Sir R.) on the geological map of Ireland, 1835, 56.
—— on the leading features of the geology of Ireland, and particularly the carboniferous or mountain-limestone district, 1837, 88.
—— on the geological structure of the south of Ireland, 1838, 81.
—— on the yellow sandstone and other points of the geology of Ireland, 1840, 110.
—— on the fossils discovered in the carboniferous or mountain limestone of Ireland, 1842, 51.
—— on the distribution of erratic blocks in Ireland, and particularly those of the north coasts of the counties of Sligo and Mayo, 1843, 40.
—— on the lower portion of the carboniferous limestone series of Ireland, 1843, 42.
—— on the old red sandstone, or Devonian and Silurian districts of Ireland, 1843, 46.
—— on the occurrence of a bed of sand containing recent marine shells, on the summit of a granite hill on the coast of the county of Mayo, 1843, 50.
—— on certain Silurian districts of Ireland, 1844, 46.
—— on the lower members of the carboniferous series of Ireland, 1852, 46.
—— on the geology of Ireland, 1852, 47.
—— on the relations of the rocks at or below the base of the carboniferous series of Ireland, 1857, 66.
GRIME (Mr.) on wrought-iron wheels for locomotive engines, 1840, 212.
—— on Dennett's rockets for preserving lives from shipwreck, 1840, 214.
*GROLLET (J. P.) on a process for preventing the deleterious effects of dry grinding, 1843, 102.

GROOBY (J.) on the moon's atmosphere, 1847, 8.
GROSHAUS (Dr.) on the supposed antagonism between consumption and ague, 1847, 94.
GROVE (W. R.) on a small voltaic battery of extraordinary energy, 1839, 36.
—— on photography, 1844, 37.
—— on the gas voltaic battery, 1845, 30.
—— on the decomposition of water into its constituent gases by heat, 1846, 48.
—— on the quantity of electrolysis as affected by the extent of the sectional area of the electrolyte, 1847, 52.
—— on the peculiar cooling effects of hydrogen and its compounds in cases of voltaic ignition, 1848, 54.
—— on the conduction of electricity by flame and gases, 1853, 42.
—— on the stratified appearance of the electrical discharge, 1856, 10.
—— on the influence of light on polarized electrodes, 1858, 17.
—— on the transmission of electrolysis across glass, 1860, 69.
GROVER (Rev. H. M.) on an orbital motion of the magnetic pole round the north pole of the earth, 1849, 8.
GRUBB (T.) on improvements in the optical details of reflecting telescopes and equatorial instruments, 1857, 8.
GUERIN (M.) on the Georama as a method of teaching geography, 1846, 73.
GUERRY (M.) on the criminal statistics of England and France, 1851, 100.
GULLINE (Mr.) on safety-valves for steam-boilers, 1840, 213.
GUNN (Rev. J.), notice of the remains of the fossil elephant, 1851, 58.
GURNEY (G.) on the possibility of fire from the use of hot water in warming buildings, and of explosions in steam-engine boilers, 1841, 49.
*GUTCH (W. G.), notice of certain barometers invented by Mr. Bursill, 1841, 42.
GÜTERBOCK (Dr.) on instruments made from softened ivory, 1839, 109.
*GUTHRIE (Dr.), reports from the laboratory at Marburg, 1859, 68.
GUY (Dr.) on the duration of life in the several professions, 1846, 99.
GUY (W. A.) on the fluctuations in the number of births, deaths, and marriages, and in the number of deaths from special causes, in the metropolis, during fifteen years, 1855, 167.

HABERSHON (G. F.), notes from the Barbary coast, with fossils, 1857, 67.
HAEFFELY (Ed.) on the compounds of tin with arsenic, 1855, 64.
HAIDINGER (Prof.) on the mineralogical and geological museum of the Imperial Mining Department of Vienna, 1842, 39.
HAIDINGER (Prof.) on the optical properties of cadmacetite, 1855, 11.
HAILSTONE (Rev. J.) on a peculiar oscillation of the barometer, 1834, 569.
HAINES (Dr. C. Y.) on some beds of limestone in the valley of Cork, 1843, 51.
*HAKE (Dr. T. G.) on a new apparatus for supplying warm air to the lungs, 1851, 83.
HALIDAY (A. H.), zoology of Lough Neagh compared with that of the Lake of Geneva, 1846, 84.
HALL (Mr.) on a machine for raising water by an hydraulic belt, 1838, 158.
HALL (Dr.) on the sensibilities of the cerebral nerves, 1834, 676.
HALL (ELIAS) on his mineral map of Derbyshire, 1837, 91.
*—— on the geology of Derbyshire and neighbouring counties, 1842, 58.
*——, maps and sections of Derbyshire, and the Lancashire coal-field, 1843, 64.
—— on the Midland coal formations of England, 1844, 46.
*—— on the toadstones of Derbyshire, 1845, 56.
HALL (G. W.), on the connexion of the weather with the tide, 1836, 41.
—— on accelerating the growth of wheat, 1836, 106; 1839, 86.
—— on improvements in agriculture, 1837, 139.
—— on the promotion of vegetable growth, 1842, 64.
—— on the differences of the quality of the milk of cows for the different purposes of milk and cheese, 1842, 99.
HALL (Dr. M.) on the sensibility of the glosso-pharyngeal nerve, 1836, 125.
*HALL (Capt. W.), proposed new route between the Atlantic and Pacific by the River Maulé in Chili, 1853, 82.
HALL (W.) on a process for covering submarine wires with india-rubber, 1860, 211.
*HALSWELL (E.) on the proportions between the numbers of accusations and convictions in the metropolitan district, 1835, 124.
HAM (J.) on the mud deposited by the tidal waters of the Severn, Usk, and Avon, 1837, 76.
*HAMILTON (Mr.), method by which the resistance caused by the pressure of the wind against the valves of the organ can be overcome, 1839, 131.
HAMILTON (A. H.) on electric currents in the earth's surface, 1857, 48.
HAMILTON (C. W.) on a yew found in a bog, 1835, 76.
——, notice of the nut of the *Palo de Vaca*, and of the wax-tree of Guiana, 1835, 78.
HAMILTON (G.) on the results of experiments on the preservation of fresh meat, 1854, 69.
HAMILTON (Dr. M.) on earthquakes on the west coast of South America, 1840, 123.

HAMILTON (Dr. M.) on earthquakes in South America, 1850, 82.
—— on the Lobos Islands, 1852, 75.
—— on the lake Aulaga, and its drainage in the desert of Caranjas, in Bolivia, 1854, 120.
*HAMILTON (W. J.) on Prof. Savi's work on the phenomena observed during the earthquakes in Tuscany, 1847, 63.
HAMILTON (Sir W. R.) on a view of mathematical optics, 1831–32, 545.
——, notice of J. MacCullagh's memoir on the attractions of spheroids, Prof. Allman's memoir on numeral evolution, and of his own theorem respecting differences and differentials of functions of zero, 1831–32, 545.
—— on a characteristic function in optics, 1833, 360.
—— on the application to dynamics of a general mathematical method previously applied to optics, 1834, 513.
—— on conjugate functions, or algebraic couples, as tending to illustrate the doctrine of imaginary quantities, 1834, 519.
—— on a new theory of logologues; also, new theory of varying orbits, 1835, 7.
—— on the calculus of principal relations, 1836, 4, 41.
——, exposition of the argument of Abel respecting equations of the fifth degree, 1837, 1.
*——, new applications of the calculus of principal relations, 1837, 1.
*——, exposition of Mr. Turner's theorem of odd numbers, and the cubes and other powers of natural numbers, 1837, 1.
—— on the propagation of light *in vacuo*, 1838, 2.
—— on the propagation of light in crystals, 1838, 6.
*—— on a mode of expressing fluctuating or arbitrary functions by mathematical formulæ, 1842, 10.
—— on a theorem in the calculus of differences, 1843, 2.
*—— on some investigations connected with the calculus of probabilities, 1843, 3.
—— on some investigations connected with equations of the fifth degree, 1843, 4.
—— on a theory of quaternions, 1844, 2.
——, exposition of a system of quaternions, 1845, 3.
*—— on an isoperimetrical problem treated by the calculus of quaternions, 1847, 4.
*—— on some applications of the calculus of quaternions to the theory of the moon, 1847, 4.
*—— on some new applications of quaternions to geometry, 1849, 1.
*—— on polyzones inscribed on a surface of the second order, 1850, 2.
—— on biquaternions, 1852, 2.
—— on an extension of quaternions, 1854, 1.
*HAMILTON (Sir W. R.) on the conception of the anharmonic quaternion, and on its application to the theory of involution in space, 1855, 7.
*—— on some applications of quaternions to cones of the third degree, 1857, 3.
—— on the Icosian calculus, 1857, 3.
—— on an application of quaternions to the geometry of Fresnel's wave-surface, 1859, 248.
HANCOCK (A.) on some new species of Mollusca nudibranchiata, with observations on the structure and development of the animals of that order, 1843, 73.
—— on Pterochilus, a new genus of nudibranchiate mollusca, and two new species of Doris, 1844, 66.
—— on a new genus (Dendronotus) of mollusca nudibranchiata, 1845, 65.
—— on some new and rare British species of naked Mollusca, 1846, 83.
—— on British Mollusca, with descriptions of new species, 1847, 73.
—— on the anatomy of Scyllæa, 1847, 77.
*—— on the boring of Mollusca into rocks, 1848, 125.
—— on the anatomy of Doris, 1850, 124.
—— on two new species of nudibranchiate mollusca (Thecacera virescens and Oithona nobilis), and a new genus (Oithona), 1851, 74.
—— on the branchial currents of Pholas and Mya, 1851, 74.
—— on the anatomy of the Brachiopoda, 1856, 94.
—— on certain vermiform fossils found in the mountain-limestone districts of the north of England, 1858, 80.
HANCOCK (Dr. J.) on the manati of Guiana, 1836, 98.
—— on a new and scandent species of the Norantia, or Ascium of Guiana, 1836, 104.
—— on the disease called Cocobœ by the Africans, or Arabian leprosy, the Arapatta of the Caribes of Guiana, and the Radesyge of Northern Europe, 1837, 128.
HANCOCK (JOHN) on the Greenland and Iceland falcons, 1838, 106.
HANCOCK (Prof. W. N.) on the variations in the supply of silver coin in Ireland during the operations for the relief of distress in 1846–47, 1847, 97.
—— on a form of table for collecting returns of prices in Ireland, 1849, 92.
—— on the use to be made of the Ordnance Survey in the registration of judgments and deeds in Ireland, 1849, 93.
——, the usury laws—statistics of pawnbroking, 1849, 93.
—— on the discovery of gold in California, 1849, 94.
——, statistics respecting the sale of encumbered estates in Ireland, 1850, 148.
—— on the causes of distress at Skull and

BEESE LIBRARY OF THE UNIVERSITY OF CALIFORNIA

Skibbereen during the famine in Ireland, 1850, 149.
HANCOCK (Prof. W. N.) on the cost of obtaining patents in different countries, 1850, 149.
—— on the prospects of the beet-sugar manufacture in the United Kingdom, 1851, 101.
—— on the duties of the public in respect to charitable savings-banks, 1851, 103.
——, should boards of guardians endeavour to make pauper labour self-supporting, or should they investigate the causes of pauperism ?, 1851, 104.
——, an investigation into the question, Is there really a want of capital in Ireland ?, 1851, 106.
——, should our gold standard of value be maintained if gold becomes depreciated in consequence of its discovery in Australia and California ?, 1852, 116.
——, are there any impediments to the competition of free labour with slave labour in the West Indies ?, 1852, 117.
*——, the definition of income in economic science compared with the existing taxes on income, 1856, 144.
HANDYSIDE (Dr. P. D.) on the offices of lacteals, lymphatics, and veins in the function of absorption, 1835, 92.
—— on the Sternoptixinæ, 1838, 110.
HANNAH (Dr.) on the treatment of pertussis by cold washing of the chest, 1840, 158.
HANSON (Rev. A. W.) on the Ghá nation of the Gold coast of Africa, 1849, 85.
*HARCOURT (A. V.) on the oxidation of potassium and sodium, 1860, 70.
HARCOURT (Rev. W. V.) on an oil-gas lamp, 1831–32, 88.
—— on the effects of long-continued heat on mineral and organic substances, 1834, 576.
—— on observations upon the dew-point, 1835, 54.
HARDING (Major) on the discovery of fossils on Great Hangman Hill, North Devon, 1841, 64.
*HARDING (W.) on the progress of the railway system of Great Britain, 1848, 105.
HARDY (J.) on an Acarus and a Vibrio that attack grasses, 1850, 124.
HARE (Mr.) on statistical inquiries, 1838, 177.
HARE (Dr.) on the chemical nomenclature of Berzelius, 1836, 44.
—— on a calorimotor for producing ignition at a distance, 1836, 45.
—— on volumeters, 1836, 46.
—— on the aqueous sliding-rod hydrogen eudiometer, 1836, 46.
—— on fusing platina, 1837, 41.
——, chemical experiments, 1838, 39.
—— on the preparations of barium and strontium, 1839, 36.
HARE (S.) on the curvature of the spine, 1837, 114.
*HARGRAVE (Mr. Commissioner) on infinite angles, and on the principle of mean values, 1857, 3.
HARKNESS (Prof. R.) on the position of the footsteps in the Bunter sandstone of Dumfries-shire, 1850, 83.
—— on the representatives of the mountain limestone as they occur in Dumfries-shire, 1850, 84.
—— on the fossil remains of the lower Silurians of the south of Scotland, and their position, 1852, 48.
—— on the occurrence of graphite at Almorness Head, Kirkcudbrightshire, 1852, 50.
—— on crustacean impressions from the Trias of Dumfries-shire, 1854, 86.
—— on the anthracite deposits and vegetable remains occurring in the lower Silurians of the south of Scotland, 1854, 86.
—— on mineral charcoal, 1854, 86.
—— on annelid tracks from the representatives of the millstone grits in the county of Clare, 1854, 86.
—— on the cleavage of the Devonians of the south of Ireland, 1855, 82; on the lowest sedimentary rocks of Scotland, 1855, 82.
—— on the geology of the Dingle promontory, Ireland, 1855, 83.
—— on some new fossils from the ancient sedimentary rocks of Ireland and Scotland, 1856, 65.
—— on the lignites of the Giant's Causeway and the Isle of Mull, 1856, 66.
—— on the jointing of rocks, 1856, 65.
—— on the geology of Caldbeck Fells, and the lower sedimentary rocks of Cumberland, 1857, 67.
—— on the records of a triassic shore, 1857, 68.
—— on the jointing and dolomitization of the lower carboniferous limestone in the neighbourhood of Cork, 1857, 68.
*—— on the distortion of fossils, 1858, 81.
—— on the origin of the breccias of the southern portion of the valley of the Nith, Scotland, 1858, 81.
—— on sections along the southern flanks of the Grampians, 1859, 109.
—— on the yellow sandstones of Elgin and Lossiemouth, 1859, 109.
—— on the metamorphic rocks of the north of Ireland, 1860, 79.
HARLAN (Dr. R.) on some new species of fossil saurians, 1833, 440.
HARLEY (Dr. G.), experiments on digestion, 1858, 135.
HARPER (Mr.) on galvanic connexion, 1847, 27.
HARRINGTON (G. F.) on the theory of light, 1859, 12.
HARRIS (Sir W. S.), notice of the establishment of a register of hourly observations of the thermometer in the dockyard, Plymouth, 1831–32, 59.

HARRIS (Sir W. S.) on some facts illustrative of the effect of lightning conductors, 1831–32, 568.
—— on the method of employing vibrating magnets in the investigation of the magnetic intensity of the earth, 1831–32, 560.
—— on some new phenomena of electrical attraction, 1833, 386.
—— on the construction of a new wheel-barometer, 1833, 414.
——, application of the proof plane and torsion balance to electricity, 1835, 18.
—— on an electrical balance, 1835, 17.
—— on electrical attraction, 1835, 17.
*——, new electrometer, 1835, 56.
—— on some phenomena of electrical repulsion, 1836, 19.
——, proceedings of the Meteorological Committee, 1837, 37.
—— on Capt. Couch's chock channels, 1841, 102.
—— on the protection afforded by metallic conductors against heavy strokes of lightning, 1847, 23.
—— on the general nature and laws of electrical attraction, 1847, 23.
—— on a general law of electrical discharge, 1848, 19.
—— on the law of electrical and magnetic force, 1856, 11.
—— on electrical force, 1860, 28.
HARRISON (J. PARK) on lunar influence on temperature, 1858, 36.
—— on the similarity of the lunar curves of minimum temperature at Greenwich and Utrecht, 1860, 44.
HARRISON (Prof.) on the entozoa found in the muscles of the human subject, 1835, 84.
—— on bones in the hearts of certain animals, 1835, 85.
—— on the treatment of external aneurism by pressure, 1843, 80.
——, introductory remarks to the Physiological Subsection at Dublin, 1857, 109.
HARRISON (M.) on a self-registering thermometer, 1848, 14.
HARRISON (R.) on the Diatomaceæ found in the neighbourhood of Hull, 1853, 63.
*HART (A. S.) on the effect of the resistance of water to an extended cable, 1857, 180.
HART (G.) on gas carriages for lighting railway carriages with coal-gas instead of oil, 1859, 235.
HART (W.) on an improved electric lamp, 1858, 55.
HARTLAND (F. D.) on Vesuvius and its eruptions, 1856, 111.
*—— on the most ancient map of the world, from the Propaganda, Rome, 1856, 111.
HARTLEY (J. B.) on preventing the corrosion of cast and wrought iron immersed in salt water, 1837, 56.
*HARTMANN (Baron) on an oreographical map of Finland, 1851, 88.
HARTNUP (J.) on the variation in the rates of chronometers, 1854, 20.
—— on controlling the movements of ordinary clocks by galvanic currents, 1857, 13.
HARTOP (Mr.) on the hot-air blast in the manufacture of pig iron, 1835, 52.
—— on disturbances in the coal strata of Yorkshire in relation to existing valleys, 1835, 61.
HARVEY (Dr.) on the Vertebrata of the county of Cork, 1843, 68.
——, proposal of resolution as a tribute of respect to the late Dr. R. Ball, 1857, 95.
HARVEY (A.) on the agricultural statistics of the county of Aberdeen, 1859, 210.
HARVEY (E. R.) on the mode of death by aconite, 1860, 133.
HARVEY (G.) on the geometrical analysis of the ancients having been cultivated in the northern counties of England, 1831–32, 58.
——, notice of the thermometrical observations at Devonport, 1831–32, 579.
—— on naval architecture in Great Britain, 1831–32, 607.
HASTINGS (Marchioness of) on the freshwater eocene beds of the Hordle Cliff, Hants, 1847, 63.
—— on the fossils obtained from the freshwater eocene beds of the Hordle Cliff, 1847, 63; by Prof. Owen, 65.
HAUGHTON (Dr. E.) on the Oriental bath, 1857, 110.
HAUGHTON (Sir G. C.) on the antagonism of heat and electricity, and also of the singleness of the electric fluid, with some remarks on the nature of conduction and induction, 1847, 27.
HAUGHTON (Rev. Prof.) on a model illustrative of slaty cleavage, 1857, 69.
—— on fossil stems allied to Stigmaria, from the upper beds of the old red sandstone of Hook Point, co. Wexford, 1857, 69.
HAUGHTON (J.) on the necessity for the suppression of intemperance and drunkenness, 1857, 161.
HAWKES (W.) on the strength of iron after repeated meltings, 1854, 151.
HAWKINS (Mr.) on the principle of Saxton's locomotive differential pulley, 1835, 112.
*——, notice of Harrington's electrizer, 1835, 106.
—— on Cossham's improvement of Napier's rods, 1836, 132.
HAWKINS (J. I.) on the steel suspension-bridge built over an arm of the Danube at Vienna, 1831–32, 608.
—— on the locomotive differential pulley, 1833, 424.
—— on the focal length of spectacles, 1837, 132.
—— on mechanical sculpture, 1837, 136.
—— on methods of filtering water, 1838, 163.
—— on paving roads and streets with wood, 1839, 127.

HAWKINS (J. I.) on folding plates in books and maps for the pocket, 1839, 132.
—— on the safety rotation railway, 1840, 196.
*—— on Mr. Bakewell's anglemeter, 1840, 210.
—— on the friction of water against water, 1843, 99.
—— on the formation of concrete, 1843, 99.
—— on a new oil for lubricating machinery, 1843, 99.
—— on the marine propeller invented about the year 1825 by Mr. Jacob Perkins, 1843, 100.
—— on the economy of artificial light for preserving sight, 1844, 100.
HAWKSHAW (Mr.) on the fossil footsteps in the new red sandstone quarry at Lymm in Cheshire, 1842, 56.
HAWTHORN (Mr.) on an improved method of working the valves of a locomotive engine, 1838, 160.
—— on certain improvements in locomotive and other engine boilers, 1840, 211.
HAY (Sir A. L.) on the vitrified forts on Noth and Dunnideer, Aberdeenshire, 1859, 179.
HAY (Dr. R.) on the geometrical basis of beauty, and more particularly as applied to architecture and the human form, 1850, 131.
HAYDEN (Prof.) on the physiological relations of albumen, 1857, 110.
HAYES (Dr. A. A.) on some modified results attending the decomposition of bituminous coals by heat, 1857, 50.
*HAYES (J. J.) on the mode of rendering peat economically available as a fuel, and as a source of illuminating gas, 1857, 181.
HEARDER (J. N.) on Arnott's stove, and the construction of descending flues, and their application to the purposes of ventilation, 1841, 105.
HEATH (Mr.) on the physical character, languages, and manners of the people of the Navigators Islands, 1843, 67.
HEATON (G.) on the cause and prevention of the oscillation of locomotive engines on railways, 1849, 116.
HEATON (Dr.), notice of a plant having on the same branches the leaves of two distinct species of Cytisus, 1858, 115.
HECTOR (Dr.) on the physical geography of the south-western regions of British N. America, 1858, 153.
*—— description of passes through the Rocky Mountains, 1859, 180.
—— on the geology of Captain Palliser's Expedition in British North America, 1860, 80.
—— on the climate of the Saskatchewan district, in British North America, 1860, 172.
HELMHOLTZ (Prof.) on the mixture of homogeneous colours, 1853, 5.
HEMING (Dr.) on a disease of the tongue, 1844, 84.
HENDERSON (A.) on ocean steamers and clipper ships, 1854, 152.
*—— on the measurement of ships, 1855, 207.
—— on Indian river steamers and tow boats, 1859, 235.
HENFREY (Prof. A.) on the development of vegetable cells, 1845, 68.
—— on the development of cells, 1846, 90.
—— on the anatomy of monocotyledonous stems, 1847, 83.
—— on the development of pollen, 1848, 84.
—— on the development of the embryo of flowering plants, 1856, 85.
HENNESSY (Prof. H.) on apparatus for determining the distance of objects, 1843, 102.
—— on the distribution of shooting-stars in the interplanetary spaces, 1850, 24.
—— on the connexion between geological theories and the theory of the figure of the earth, 1852, 21.
—— on the researches of German geologists, 1852, 51.
—— on isothermal lines, 1856, 39; 1857, 30.
—— on the physical structure of the earth, 1856, 26.
—— on an instrument for observing vertical currents in the atmosphere, 1856, 40.
—— on the relative distribution of land and water as affecting climate at different geological epochs, 1856, 66.
—— on the homolographical maps of M. Babinet, 1856, 112.
*—— on the inundation of rivers, 1856, 162.
—— on the direction of gravity at the earth's surface, 1857, 24.
—— on the solidification of fluids by pressure, 1857, 25.
—— on simultaneous isothermal lines, 1857, 29.
—— on the vertical currents of the atmosphere, 1857, 30.
—— on the distribution of heat over the surface of the British Isles, 1857, 30.
—— on the existence of forces capable of changing the sea-level during different geological epochs, 1857, 69.
—— on the influence of the Gulf-stream on the climate of Ireland, 1857, 132.
—— on the decrease of temperature over elevated ground, 1858, 36.
—— on the heating of the atmosphere by contact with the earth's surface, 1858, 36.
—— on the figure of an imperfectly elastic fluid, 1859, 5.
—— on mild winters in the British Isles, 1859, 50.
—— on studying the earth's internal struc-

ture from phenomena observed at its surface, 1860, 35.
HENNESSY (Prof. H.) on the principles of meteorology, 1860, 44.
——, suggestions relative to inland navigation, 1860, 211.
HENNESSY (J. P.) on the origin and elimination of Euclid's "*Reductio ad absurdum*," 1857, 3.
—— on certain pathological characters of the blood-corpuscles, 1857, 113.
—— on agricultural and manufacturing industry, 1857, 162.
—— on Dr. Whewell's views respecting the nature and value of mathematical definitions, 1858, 3.
—— on some properties of a series of the powers of the same number, 1858, 4.
—— on the causes of the fall in price of manufactured cottons, 1858, 178.
—— on some of the results of the Society of Arts' Examinations, 1858, 180; 1859, 214.
—— on the inclination of the planetary orbits, 1859, 34.
*—— on some questions relating to the incidence of taxation, 1859, 216.
*—— on certain properties of the powers of numbers, 1859, 248.
HENRY (Dr. C.) on gaseous interference, 1836, 54.
HENRY (Prof.), electrical researches by, 1837, 22.
—— on canals and railways in America, 1837, 135.
—— on the heat of the solar spots, 1845, 6.
—— on the plan adopted by the Smithsonian Institution for investigating the meteorology of North America, 1852, 26.
HENRY (Dr. W.) on the philosophical character of Dr. Priestley, 1831–32, 60.
—— on the torrefaction of yellow copper pyrites, 1831–32, 78.
HENSLOW (Rev. Prof.) on the geographical distribution of the plants of Cambridgeshire, 1831–32, 606.
—— on crystals of sugar in Rhododendron ponticum, 1836, 106.
—— on Cecidomyia tritici, 1841, 72.
—— on nodules, apparently coprolitic, from the red crag, London clay, and greensand, 1845, 51.
—— on a specimen of Papaver orientale, 1845, 72.
—— on detritus derived from the London clay and deposited in the red crag, 1847, 64.
——, notice relative to the adornment of an African dress, 1854, 99.
—— on the triticoidal forms of Ægilops, and on the specific identity of Centaurea nigra and C. nigrescens, 1856, 87.
—— on the supposed germination of mummy wheat, 1860, 110.
*HENWOOD (Mr.) on naval architecture, 1836, 130.
HENWOOD (W. J.) on the higher temperature which prevails in the slate than in the granite of Cornwall, 1837, 36.
—— on some intersections of veins in the Dolcoath and Huel Prudence mines, in Cornwall, 1837, 74.
—— on the expansive action of steam in the Cornish pumping engines, 1837, 129.
HERAPATH (J.) on the velocity of sound, 1831–32, 559.
HERAPATH (W.) on the aurora borealis, 1836, 32.
—— on arsenical poisons, 1836, 67.
—— on lithiate of ammonia as a secretion of insects, 1836, 70.
——, analysis of King's bath, Bath, 1836, 70.
—— on a new process for tanning, 1838, 71.
HERSCHEL (Sir J. F. W.) on the absorption of light by coloured media, 1833, 373.
—— on the principle and construction of the actinometer, 1833, 379.
—— on some results obtained by Prof. Forbes on the diminution of the intensity of the solar rays in traversing the atmosphere, by means of the actinometer, 1833, 380.
—— on the vitreous humour of the eye of a shark, 1838. 15.
——, observations on stars and nebulæ at the Cape of Good Hope, 1838, 17.
—— on Halley's comet, 1838, 19.
—— on a very remarkable property of the extreme red rays of the prismatic spectrum, 1839, 9.
—— on some coloured photographs, 1841, 40.
—— on a photographic process by which dormant pictures are produced capable of development by the breath, or by keeping in a moist atmosphere, 1843, 8.
——, contributions to actino-chemistry—on the amphitype, a new photographic process, 1844, 12.
—— on a model of the globe of the moon in relief, 1845, 4.
—— letter to, from Prof. Oersted, on the deviation of falling bodies from the perpendicular, 1846, 2.
——, address as President to the Chemical Section, 1858, 41.
HESS (Prof.) on an apparatus for the analysis of organic substances, 1839, 57.
HETLING (W.) on a new instrument for removing ligatures, 1836, 124.
HEURTELOUP (le Baron) on a new method of administering chloroform, 1857, 51.
HEWETT (Capt.) on the rise and fall of tide in the middle of the North Sea, 1841, 32.
HEYWOOD (J.) on the geology of the coal district of South Lancashire, 1837, 77.
—— on the education in the Polytechnic School at Paris, 1841, 96.
—— on the comparative statistics of the Universities of Oxford and Cambridge in

the 16th, 17th, and 19th centuries, 1842, 99.
*Heywood (J.), abstract of the report of the French Minister of Public Instruction on the higher schools of France, 1843, 96.
—— on the university statistics of Germany, 1845, 86.
—— on the comparative number of degrees taken at Cambridge in the 17th and 19th centuries, 1845, 86.
——, Oxford University statistics, 1846, 98.
—— on the revenues of the University and some of the Colleges of Oxford, 1852, 118.
—— on public service, academic, and teachers' examinations, 1858, 176.
Hibbert (Dr.) on the ossiferous beds of the Forth, the Clyde, and the Tay, 1834, 642.
——, D. Page on the freshwater limestone of, 1855, 91.
Higgin (J.) on the colouring matters of madder, 1848, 54.
Higgins (Rev. H. H.) on the death of the common hive bee, supposed to be occasioned by a parasitic fungus, 1858, 124.
—— on the liability of shells to injury from the growth of a fungus, 1858, 128.
—— on some specimens of shells from the Liverpool Museum, 1860, 116.
Highley (S.) on the management of some difficult subjects in the application of photography to science, 1854, 69.
—— on the means of applying photography to war purposes in the army and navy, 1854, 70.
——, Crystallogenesis, and the equivalent in the mineral kingdom corresponding to geographical distribution in the animal and vegetable kingdoms, 1856, 172.
Hill (T. W.) on a system of numerical notation, 1845, 4.
Hills (G. M.) on the round towers of Ireland, 1857, 133.
Hincks (Rev. Dr. E.) on the language and mode of writing of the ancient Assyrians, 1850, 140.
—— on the ethnological bearing of the recent discoveries in connexion with the Assyrian inscriptions, 1852, 85.
—— on the forms of the personal pronouns of the two first persons in the Indian, European, Syro-Arabic and Egyptian languages, 1852, 88.
—— on certain ancient mines, 1852, 110.
—— on the eclipse of the sun mentioned in the first book of Herodotus, 1856, 27.
—— on the relation between the newly-discovered Accadian language and the Indo-European, Semitic, and Egyptian languages; with remarks on the original values of Semitic letters, and on the state of the Greek alphabet at different periods, 1857, 134.
—— on recorded observations of the planet Venus in the 7th century before Christ, 1860, 35.
Hincks (Rev. Dr. E.) on certain ethnological boulders and their probable origin, 1860, 156.
Hincks (Rev. T.) on a peculiar organ which occurs on some of the marine Bryozoa, and which appears to indicate a difference of sex, 1852, 75.
—— on a new species of Laomedea (L. angulata), with remarks on the genera Campanularia and Laomedea, 1858, 126.
—— on some new and interesting forms of British zoophytes, 1858, 128.
Hincks (Rev. W.) on vegetable monstrosities, 1838, 120.
—— on abnormal forms in the flowers of Fuchsia, 1843, 78.
——, notice of the Neottia gemmipara, discovered in co. Cork, 1843, 78.
*—— on an anomaly of the Trifolium repens, 1852, 66.
Hindmarsh (J.) on the wild cattle of Chillingham Park, 1838, 100.
—— on the state of agriculture and the condition of the agricultural labourers in the north of Northumberland, 1838, 167.
*Hislop (Rev. S.) on the aboriginal tribes of the province of Nagpore, 1859, 266.
Hitchcock (Rev. Prof.) on foot-impressions in the new red sandstone, 1837, 60.
—— on the erosions of the earth's surface, especially by rivers, 1850, 85.
—— on terraces and ancient sea-beaches, especially those on the Connecticut river and its tributaries in New England, 1850, 87.
*Hitchman (J.) on sanitary drainage of towns, 1860, 191.
*Hochstetter (Prof. F. von) on the geology of New Zealand, 1860, 81.
*—— on the geological features of the volcanic island of St. Paul, 1860, 81.
*—— on a new map of the interior of the Northern island of New Zealand, 1860, 162.
Hodge (H. C.) on the origin of the ossiferous caverns at Oreston, 1859, 110.
Hodges (Prof. J. F.) on the phosphatic nodules of the greensand of the north of Ireland, 1852, 36.
Hodgkin (Dr.) on the effects of poisons on the animal economy, 1834, 681.
——, notice relative to the varieties of the human race, 1842, 70.
—— on the dog as the associate of man, 1844, 81.
—— on the stature of the Guanches, the extinct inhabitants of the Canary Islands, 1844, 81.
—— on the tape-worm as prevalent in Abyssinia, 1844, 85.
—— on the proposed ship-canal through the Isthmus of Suez, 1857, 199.
Hodgkinson (Prof. E.) on the strength and best forms of iron beams, 1831–32, 610.
—— on the effect of impact on beams, 1833, 421.
—— on the strength of cast iron, 1833, 423.

HODGKINSON (Prof. E.) on the collision of imperfectly elastic bodies, 1834, 534.
—— on impact and collision, 1835, 107.
—— on the power of different species of wood to resist a force tending to crush them, 1839, 125.
—— on the temperature of the earth in deep mines of Lancashire and Cheshire, 1838, 34; 1839, 19.
—— on the temperature of the earth in the deep mines near Manchester, 1840, 17.
—— on the strength of pillars of cast iron, and other materials, 1840, 202.
——, notice of Clegg's new safety lamp, 1840, 210.
——, experiments to prove that all bodies are in some degree inelastic, and a proposed law for estimating the deficiency, 1843, 23.
——, experimental inquiries into the falling off from perfect elasticity in solid bodies, 1844, 25.
—— on the strength of stone columns, 1845, 26.
——, experiments on the tubular bridge proposed by Mr. Stephenson for crossing the Menai Straits, 1846, 108.
*—— on the defect of elasticity in metals subject to compression, 1847, 43.
*—— on the strength of iron columns, 1847, 132.
*—— on investigations for the construction of Mr. Stephenson's tubular bridges at Conway and Menai Straits, 1848, 119.
—— on the strength and elasticity of stone and timber, 1849, 118.
—— on the elasticity of stone and crystalline bodies, 1853, 36.
HODGSON (J.) on the red appearance on the internal coat of arteries, 1839, 108.
HODGSON (R.) on a brilliant eruption on the sun's surface, 1860, 36.
HOGAN (W.) on the means of obviating the ravages of the potato disease, 1846, 89.
HOGG (J.), catalogue of birds observed in S.E. Durham and in N.W. Cleveland, 1844, 59.
——, synopsis of the classification of the genera of British birds, 1846, 76.
—— on a quantity of human bones discovered in a field near Billingham, Durham, 1848, 95.
—— on the geography and geology of the peninsula of Mount Sinai and the adjacent countries, 1849, 52.
—— on the Sicilian and Sardinian languages, 1850, 140.
—— on the artificial breeding of salmon in the Swale, 1853, 68.
—— on Iceland, its inhabitants and language, 1853, 82.
—— on a journey by Lieut.-Gen. Jochmus to the Balkan, 1853, 84.
—— on some variations of British plants, 1857, 96.
—— on the supposed biblical names of Baalbec, and on the position of Baalgad, 1857, 143.
HOGG (J.) on a species of Phalangista killed in the county of Durham, 1859, 149.
—— on Gebel Haurân, its adjacent districts, and the eastern desert of Syria, with remarks on their geography and geology, 1859, 180.
——, notice of the Karaïte Jews, 1859, 181.
—— on the distinctions of a plant and an animal, and on a fourth kingdom of nature, 1860, 111.
*HOLDEN (MOSES), method of arriving at the decimal part of the sine or tangent below a second of a degree, &c., 1842, 10.
—— on working a steam-engine with rarefied air, 1855, 207.
HOLDEN (Mr.) on the progress of the sewed muslin manufacture in Ireland, 1852, 118.
HOLLAND (Dr.) on the influence of respiration on the circulatory system, 1837, 104.
—— on the cause of death from a blow on the stomach, 1837, 104.
HOOKER (Dr. J. D.) on the diatomaceous vegetation of the Antarctic ocean, 1847, 83.
——, meteorological and other phenomena observed in India and Egypt, 1848, 17.
HOOPER (Lieut. W. H. H.) on the aurora, 1852, 26.
HOPE (Rev. F. W.) on the probability that some of the early notions of antiquity were derived from insects, 1836, 99.
—— on Filaria, 1837, 97.
——, notice of rare Coleopterous insects from the collection of Mr. Melly, 1837, 100.
—— on the modern classification of insects, 1838, 113.
—— on noxious insects which injure the apple-trees and hops, 1838, 113.
HOPKINS (Mr.) on the criminal statistics of Lancashire, 1842, 95.
HOPKINS (EVAN) on the polarity of cleavage planes, their conducting power, and their influence on metalliferous deposits, 1848, 69.
*—— on the optical illusions of the atmospheric lens, 1855, 12.
—— on the gold-bearing districts of the world, 1855, 83.
—— on the structure of the globe, its superficial changes, and the polarity of all terrestrial operations, 1855, 83.
HOPKINS (T.) on the influence of mountains on temperature in the winter in certain parts of the northern hemisphere, 1841, 28.
*—— on a meteorological chart, 1842, 26.
—— on the meteorology of the northern Atlantic, the south-west monsoon of India, and places adjacent, 1842, 26.
—— on the irregular movements of the barometer, 1844, 21.

HOPKINS (T.) on the diurnal variations of the barometer, 1844, 22.
—— on the relations of the semidiurnal movements of the barometer to land and sea breezes, 1846, 25.
—— on mirage on the sea-coast of Lancashire, 1849, 16.
—— on the means of computing the quantity of vapour contained in a vertical column of the atmosphere, 1849, 24.
—— on the causes of the rise of the isothermal lines (as represented on Prof. Dove's maps) in the winters of the northern hemisphere, 1850, 34.
—— on the daily formation of clouds at Makerstoun, 1850, 36.
—— on the means of computing the quantities of aqueous vapour in the atmosphere, 1850, 36.
—— on the cause of the mild winter temperature of the British Islands, 1857, 144.
HOPKINS (W.) on certain points in physical geology, 1836, 78.
—— on the refrigeration of the earth, 1837, 91.
—— on certain results regarding the minimum thickness of the crust of the globe, 1839, 26.
—— on the cause of the motion of glaciers, 1843, 62.
—— on traces resembling ornithichnites, 1845, 52.
—— on certain deviations of the plumb-line from its mean direction, as observed in the neighbourhood of Shanklin Down, Isle of Wight, 1846, 59.
*—— on the dispersion of granite blocks from Ben Cruachan, 1850, 83.
—— on the distribution of granite rocks from Ben Cruachan, 1851, 59.
—— on the effect of pressure on the temperature of fusion of different substances, 1854, 57.
—— on the conductivity of various substances for heat, 1857, 70.
——, address as President of the Geological Section at Leeds, 1858, 72.
HOPKINSON (J.) on the steam-engine indicator, 1853, 118.
—— on a patent safety alarum for steam-boilers, 1853, 119.
—— on an improved compound patent safety-valve for steam-boilers, 1853, 119.
—— on an improved patent steam-engine boiler, designated the greatest resistance steam-boiler, 1853, 120.
—— on the cause of steam-boiler explosions, and means of prevention, 1858, 212.
HORE (Rev. W. S.) on the flora of Devon and Cornwall, 1841, 75.
*HORNBECK (Dr. H. B.) on some minerals from the Isle of St. Thomas, 1856, 66.
HORNER (Dr. F. R.) on some discoveries relative to the chick in ovo, and its liberation from the shell, 1853, 68.
HORSLEY (J.) on the conversion of tannin into gallic acid, 1856, 52.
—— on testing for strychnia, brucia, &c., 1856, 53.
——, new method of instituting post-mortem researches for strychnia, 1856, 53.
—— on a new method of extracting the alkaloids strychnia and brucia from nux vomica without alcohol, 1856, 54.
——, experiments on animals with strychnia, and probable reasons for the non-detection of the poison in certain cases, 1856, 55.
HOUSTON (Dr. J.) on the circulating organs in diving animals, 1835, 81.
—— on a variety of hydatid, 1835, 83.
——, account of twin fœtuses, one without brain, heart, lungs, and liver, 1836, 122.
—— on the means adopted by nature in the suppression of hæmorrhage from large arteries, 1843, 80.
—— on the circulation of the blood in acardiac fœtuses, 1843, 81.
——, notice of M'Clean's new instrument for the removal of calculi, 1843, 81.
HOW (H.) on the hyposulphites of the organic alkalies, 1854, 70.
HOWARD (H.) on plate-glass-making in England, 1846, 101.
HOWARD (LUKE) on the difference of the quantity of rain at different heights, 1834, 563.
—— on a cycle of eighteen years in atmospherical phenomena, 1842, 24.
——, the mean year, or solar variation through the seasons of the barometer in the climate of London, 1844, 14.
—— on a lunar meteorological cycle, 1845, 25.
HOWARD (S.) on a continued spontaneous evolution of gas at Charlemont, Staffordshire, 1849, 38.
*HOWELL (Dr.), notice of case in which a large portion of the ilium was eliminated from the body, 1836, 124.
*HOYLE (Mr.), new logarithmic calculations and views, 1840, 55.
HUDSON (Dr. H.) on the radiation of heat, 1835, 9.
HUGGON (W.) on the alkaline waters of Leeds, 1858, 51.
HUGHES (W.) on the application of a decimal scale to the construction of maps, 1857, 145.
HULL (E.) on a geological section, from the Island of Little Eye across the peninsula between the estuaries of the Dee and Mersey to the east of Liverpool, 1854, 86.
—— on the south-easterly attenuation of the oolitic, liassic, triassic, and Permian formations, 1856, 67.

*Hull (E.) on the six-inch maps of the Geological Survey, 1860, 81.
—— on the Blenheim iron ore, and the thickness of the formations below the great oolite at Stonesfield, Oxfordshire, 1860, 81.
Hume (Rev. Dr. A.), the origin, characteristics, and dialect of the people in the counties of Down and Antrim, 1852, 89.
—— on the education of the poor in Liverpool, 1853, 103.
*—— on the education of the poor in Liverpool, 1854, 138.
—— on the ethnology of the Liverpool district, with notices of the Hoylake antiquities, 1854, 129.
Hume (J.) on the annual increase of property and of exports and imports in Canada, 1848, 112.
Humphreys (J.) on the mollusca of the co. of Cork, 1843, 71.
Humphry (G. M.) on the homology of the skeleton, 1858, 126.
*Hunt (Dr. J.) on the antiquity of the human race, 1860, 162.
Hunt (R.) on the influence of the ferrocyanate of potash on the iodide of silver as a photographic preparation, 1841, 47.
—— on the changes which bodies undergo in the dark, 1843, 10.
—— on chromatype, a new photographic process, 1843, 34.
—— on the influence of light on the growth of plants, 1843, 35.
—— on the influence of light on metallic and other compounds, 1843, 35.
—— on the influence of light on chemical compounds, and electro-chemical action, 1844, 35.
—— on the ferrotype, and the property of sulphate of iron in developing photographic images, 1844, 36.
—— on the chemical changes produced by the solar rays, and the influence of actinism in disturbing electrical forces, 1845, 29.
—— on the coloured glass employed in glazing the palm house in the Royal Botanic Garden at Kew, 1847, 51.
——, notice of his explanation of the Daguerreotype processes on paper and glass, 1853, 4.
—— on a method of accelerating the germination of seeds, 1853, 63.
—— on the mineral produce of Yorkshire, 1858, 181.
Hunt (T. S.) on some points in chemical geology, 1860, 83.
Huetado (V.) on the geographical distribution of and trade in the Cinchona, 1860, 162.
Hutchinson (G.) on a method of prognosticating the probable mean temperature of the winter months from that of corresponding months in the preceding summer, 1840, 41.
Hutchison (G.) on the nature and causes of the diurnal oscillations of the barometer, 1843, 19.
Hutton (W.) on the Whin Sill of Cumberland and Northumberland, 1831–32, 76.
Hutton (Dr.) on a case of deficient development of the right hemisphere of the brain, 1835, 99.
Huxley (Prof. T. H.) on the corpuscles of the blood of Amphioxus lanceolatus, 1847, 95.
—— on the genus Sagitta, 1851, 77.
—— on the anatomy of the hydrostatic Acalephæ, 1851, 78.
—— on a new form of sponge-like animal, 1851, 80.
—— on the structure of the Ascidians, 1852, 76.
—— on the vascular system of the lower Annulosa, 1854, 109.
—— on the genus Pteraspis, 1858, 82.
—— on the newly discovered reptilian remains from the neighbourhood of Elgin, 1859, 261.
*—— on the development of Pyrosoma, 1860, 136.
Hyndman (G. C.) on species obtained by deep dredging near Sana Island, off the Mull of Cantire, 1842, 70.
——, notice of Nereis tubicola, dredged off Sana Island, Scotland, 1843, 76.
—— on a species of hydrostatic Acalepha (Apolemia Gettiana) taken in Belfast Bay, 1843, 76.
——, dredging on the north coast of Ireland, 1844, 64.
*—— on a new species of Acaleph from Belfast Bay, 1852, 77.
—— on a curious monstrosity of form in the Fusus antiquus, 1857, 104.

*Ibbotson (L. L. B.), notice of his models of the Principality of Neufchatel, and Undercliff, Isle of Wight, 1836, 94.
*—— on the Daguerreotype as applied to the drawing of fossils, 1840, 121.
—— on a method of electrotype by which the deposition on minute objects is easily accomplished, 1844, 39.
—— on the tertiary and cretaceous formations of the Isle of Wight, 1844, 43.
—— on electrotyping plants, 1845, 74.
*——, notice of models and sections of the Isle of Wight, 1846, 58.
—— on three sections of the oolitic formations on the Great Western Railway, at the west end of Sapperton tunnel, 1846, 61.
—— on the geology of the neighbourhood of Stamford and Peterborough, 1847, 127.
—— on the position of the chloritic marl or phosphate-of-lime bed in the Isle of Wight, 1848, 69.
——, translation of Dr. Sacc's paper on the chemical and physiological effects of feeding fowls, and on the changes and chemical

composition of eggs during incubation, 1848, 89.
Iliff (Dr. W. T.), experiments on the roots of the Canna indica, with reference to their value in an economical point of view, 1847, 85.
Inglis (Dr.) on the conducting powers of iodine, 1836, 66.
—— on the skull of Eugene Aram, 1838, 125.
—— on the increase of small-pox, and origin of Variola-vaccinia, 1839, 104.
—— on a new species of Nautilus from the Halifax coal beds, 1847, 64.
Inglis (Sir R. H.) on a phenomenon seen at Gais, Switzerland, 1849, 17.
Inman (Dr. T.) on the power by which insects are enabled to adhere to smooth perpendicular surfaces, 1854, 109.
—— on a case of partial albinoism in a black man, 1854, 110.
Inskip (J. M.), account of the exploration of the Isthmus of Darien under Captain Prevost, 1855, 148.
*Irminger (Capt.) on the arctic current around Greenland, 1856, 112.
Isbister (A. K.) on the Chippewyan Indians, 1847, 119.
—— on the Nehanni tribe of a Koloochian class of American Indians, 1847, 121.
—— on the Loucheux Indians, 1847, 121.
—— on the ethnology of New Caledonia, 1849, 85.
Isoard and Son (MM.) on a new form of instantaneous generator of illuminating gas by means of superheated aqueous vapour and any hydrocarburet, 1859, 69.

Jackson (S.) on routes from Lima to the navigable branches of the Amazon, with notes on Eastern Peru as a field for colonization, 1857, 145.
Jacob (Dr.) on fossil Polyparia, 1835, 59.
—— on the mammary glands in the Cetacea, 1835, 86.
Jacob (W. S.) on a folding dome for observatories, 1850, 180.
—— notes on the British Association Catalogue of Stars, 1854, 25.
—— on certain anomalies presented by the binary star 70 Ophiuchi, 1855, 25.
Jacobi (Prof.) on the principles of electromagnetical machines, 1840, 18.
—— on his discovery of galvano-plastics, or electrotype, 1840, 89.
—— on a new general principle of analytical mechanics, 1842, 2.
James (Colonel Sir H.) on refraction, 1858, 38.
—— on the geometrical projection of two-thirds of the surface of the sphere, 1858, 151.
—— on the application of his geometrical projection of two-thirds of the sphere to the construction of charts of the stars, &c., 1859, 183.
James (Colonel Sir H.) on the Roman camp at Ardoch, and the military works near it, 1859, 183.
James (J.) on the worsted manufactures of Yorkshire, 1858, 182.
Jameson (Prof.) on the fossil fish Cephalaspis, 1834, 646.
*Jamieson (R.) on a compass independent of local attraction, 1855, 207.
Jamieson (T. F.) on the connexion of the granite with the stratified rocks in Aberdeenshire, 1859, 114.
—— on the drift beds and boulders of the north of Scotland, 1859, 114.
—— on the birds of the north of Scotland, 1859, 150.
Jardine (Sir W.) on the Salmonidæ of the north-west of Sutherlandshire, 1834, 613.
—— on the Coregoni of Scotland, 1855, 111.
——, address as President of the Natural History Section, 1859, 126.
Jarrett (Rev. Prof.) on algebraic equivalence, 1845, 1.
—— on the summation of certain circular functions, 1847, 5.
—— on the lexicography of the Semitic and Indo-Germanic languages, 1847, 122.
*—— on alphabets, 1860, 163.
*Jarvis (E.) on the system of taxation prevailing in the United States, 1860, 191.
Jeffery (H. M.) on a theorem in combinations, and on a particular class of congruences, 1856, 3, 6.
Jeffrey (Mr.) on a new hydraulic apparatus, 1840, 213.
Jeffreys (Mr.), notice of a fire-grate, 1840, 213.
Jeffreys (Dr.) on the uses of the conglobate glands, 1840, 156.
Jeffreys (J. G.), species obtained by dredging at Oban, 1842, 75.
——, notice of rare and recent British shells, 1848, 71.
—— on the recent species of Odostomia, a genus of gasteropodous mollusks inhabiting the seas of Great Britain and Ireland, 1848, 79.
—— on some rare mollusca collected by Mr. Barlee in Zetland, 1849, 78.
—— on specimens of the common whelk having double opercula, 1860, 117,
—— on the British Teredines or shipworms, 1860, 117.
Jeffreys (Julius) on the solvent power exercised by water at high temperatures on siliceous minerals, 1840, 125.
Jeffreys (Dr. T.), teeth and bones from the caves of Cefn, Denbighshire, 1837, 77.
—— on the remains found in a bed of diluvium in a cave at the Cefn rocks in Denbighshire, 1837, 96.
*Jeffries (Mr.) on warming and ventilating, 1831, 131.
Jellett (Rev. Prof.) on some general propositions connected with the theory of attractions, 1857, 3.

JELLETT (Rev. Prof.) on a new instrument for determining the plane of polarization, 1860, 13.
JELLICOE (C.) on improving the mode of keeping and stating the national accounts, 1854, 138.
JEMISON (W. H.) on the prevention of crime, 1857, 162.
JENKIN (FLEEMING) on gutta percha as an insulator at various temperatures, 1859, 248.
—— on the retardation of signals through long submarine cables, 1859, 251.
JENKINS (J.) on auroræ observed at Swansea, 1848, 22.
——, meteorological phenomena observed at Swansea, 1848, 23.
JENNINGS (F.) on some geological phenomena in the vicinity of Cork, 1843, 51.
JENNINGS (T.), chemical suggestions on the agriculture of Cork, 1843, 38.
JENYNS (Rev. L.) on genera and subgenera, 1833, 440.
—— on certain species of Sorex, 1838, 104.
—— on the turf of the Cambridgeshire fens, 1845, 75.
—— on timber attacked by the larvæ of Callidium bajulum, 1847, 85.
—— on the variation of species, 1856, 101.
JERVIS (Major) on the trigonometrical survey of India, 1838, 98.
JOBERT (A. C. G.) on graphic granite, 1846, 69.
JOCHMUS (Lieut.-Gen.) on a journey to the Balkan, or Mount Hæmus, from Constantinople, 1853, 84.
JOHNSON (Capt. E. J.) on the application of native alloy for compass pivots, 1840, 198.
—— on the deviations of the compasses of H.M. steamships Ajax and Blenheim, 1851, 8.
—— on placing compasses on board of iron ships, 1852, 6.
JOHNSON (H.) on a deep-sea pressure-gauge, 1859, 236.
——, improved instrument for describing spirals, 1860, 60.
JOHNSON (M. J.) on the detection and measurement of atmospheric electricity by the photo-barograph and thermograph, 1855, 40.
JOHNSON (R.) on alloys, 1855, 50.
—— on the specific gravities of alloys, 1859, 66.
JOHNSON (R. L.) on illuminating peat gas, 1857, 51.
*—— on decimal coinage, 1859, 215.
JOHNSON (W.) on the granite quarries of Dartmoor, and their railways and machinery, 1841, 105.
JOHNSON (Prof. W. R.) on some theoretical and practical methods of determining the calorific efficiencies of coals, 1851, 47.
JOHNSTON (A. KEITH) on the geographical distribution of disease, as indicating the connexion between natural phenomena and health and longevity, 1850, 150.
JOHNSTON (J.) on a new rain-gauge, 1840, 211.
JOHNSTON (Prof. J. F. W.) on vanadium, 1831–32, 78.
——, examination of the sulphuretted sulphate of lead from Dufton, 1831–32, 577.
—— on a method of analysing carbonaceous iron, 1833, 400.
—— on the chemical composition of the crystallized oxychloride of antimony, 1834, 587.
—— on the cause of the optical properties of chabasie, 1835, 44.
—— analysis of single and double iodides of gold, 1835, 45.
—— on paracyanogen, 1836, 67.
—— on a variety of ozocerite, 1837, 51.
—— on a new compound of nitrate with oxalate of lead, 1837, 52.
—— on the law of isomorphism, 1838, 59.
—— on a new compound of sulphate of lime with water, 1838, 59.
—— on a new compound of bicyanide with binoxide of mercury, 1838, 59.
—— on the origin of petroleum, and on the petroleum from Whitehaven, 1838, 60.
—— on Middletonite, 1838, 60.
—— on the resin of gamboge and its compounds, 1838, 60.
—— on resins, 1840, 82.
—— on some varieties of peat, 1840, 83.
—— on the resin of sarcocolla, 1840, 83.
*—— on the chemical principles of the rotation of crops, 1845, 34.
*—— on the ashes of plants, 1845, 35.
*—— on the origin and composition of the mineral called rottenstone, 1853, 42.
—— on the formation of magnesian limestone, 1853, 42.
*—— on the properties and composition of the cocoa leaves, 1853, 43.
—— on the causes, physical and chemical, of diversities of soils, 1853, 43.
—— on a chemical cause of change in the composition of rocks, 1853, 52.
JONES (C. W.) on the analysis of wheat, a peculiar volatile fluid, and a soluble modification of gluten, nitrogen in lignin, &c., 1836, 74.
JONES (E.) on the drainage of the metropolis, 1858, 213.
*JONES (Dr. H. Bence), Prof. Schönbein's latest experiments on the allotropic conditions of oxygen, 1858, 52.
JONES (Rev. H. L.), statistics of the Universities of Oxford and Cambridge, 1838, 170.
—— on the commercial statistics of France, 1842, 98.
JONES (Prof. R.) on an apparatus for observing fish (especially the Salmonidæ) in confinement, 1839, 93.
*JONES (Prof. T. WHARTON) on the forces by which the circulation of the blood is carried on, 1852, 80.

JOPLING (R. T.) on the mortality among officers of the British army in the East, 1856, 144.
JORDAN (C. J.) on increasing the intensity of the oxyhydrogen flame, 1844, 33.
JORDAN (T. B.) on copying fossils by a galvanic deposit, 1841, 67.
*JOTTRAND (M.) on the progress of free trade on the Continent, 1857, 163.
JOULE (Dr. J. P.) on the electric origin of the heat of combustion, 1842, 31.
——, description of a galvanometer, 1843, 14.
—— on the calorific effects of magneto-electricity, and the mechanical value of heat, 1843, 33.
—— on specific heat, 1844, 34.
—— on the mechanical equivalent of heat, 1845, 31.
—— on the expansion of salts, 1846, 49.
—— on the mechanical equivalent of heat, as determined by the heat evolved by the agitation of liquids, 1847, 55.
—— on the mechanical equivalent of heat, and on the constitution of elastic fluids, 1848, 21.
—— on the heat of vaporization of water, 1849, 1.
—— on some amalgams, 1850, 55.
—— on a method of sounding in deep seas, 1851, 22.
*—— on the thermal effects of air rushing through small apertures, 1852, 16.
——, experiments with a large electro-magnet, 1855, 12.
—— on the heat developed by friction in air, 1859, 12.
—— on surface condensation, 1859, 236.
JOY (D.) on the application of mechanical power to the bellows of organs, 1858, 213.
JUCKES (J.), furnace for consuming smoke and economizing fuel, 1842, 108.
——, furnace for burning smoke, 1843, 99.
JUKES (J. BEETE) on the position of the rocks of the Penine chain, Derbyshire, 1838, 79.
—— on some tertiary rocks in the islands stretching from Java to Timor, 1846, 67.
—— on the geological structure of Australia, 1846, 68.
—— on the three races of men inhabiting the islands of the Indian and Pacific oceans, 1846, 114.
—— on the aborigines of Newfoundland, 1846, 114.
—— on the relations between the new red sandstone, the coal-measures, and the Silurian rocks of the South Staffordshire coal-field, 1849, 55.
—— on Devonian rocks in the south of Ireland, 1852, 51.
—— on the one-inch map of the northern part of the county of Wicklow, 1854, 87.
—— on the alteration of clay-slate and grit-stone into mica-schist and gneiss by the granite of Wicklow, &c., 1856, 68.
JUKES (J. BEETE) on the geological structure of the Dingle promontory, co. Kerry, 1857, 70.
—— on the old red sandstone of South Wales, 1857, 73.
*—— on the geology of Lambay Island, 1857, 75.
*——, notice of the one-inch geological map of Ireland, 1857, 75.
—— on the igneous rocks interstratified with the carboniferous limestones of the basin of Limerick, 1860, 84.
*JULIEN (M.) on the formation of a society to collect the statistics of all civilized countries, 1845, 90.

*KANE (Dr. E. K.), expedition up Smith's Sound in search of Sir John Franklin, 1856, 113.
KANE (Sir R. J.) on the interference of sound, 1835, 13.
—— on the salts of sulpho-methylic acid, 1835, 42.
—— on the protochlorides of platina and tin, 1835, 44.
—— on compounds obtained from pyro-acetic spirit, 1837, 52.
——, remarks on Prof. Draper's paper on a change produced by exposure to the beams of the sun in the properties of an elementary substance, 1843, 9.
KARSTEN (Dr. M.) on an amorphous boracite, 1847, 55.
*KAVANAGH (J. W.) on the rise, progress, and prospects of popular education in Ireland, 1857, 163.
KEELE (J. R.) on the Artesian well on Southampton Common, 1846, 52.
KEIR (W.) on the geology of Castle Hill, Ardrossan, 1840, 95.
*KELEHER (Rev. W.) on the statistics of the parish of Kilmurry, co. Cork, 1843, 93.
KELLAND (Prof.) on the conduction of heat, 1840, 15.
—— on the theory of waves, 1840, 50.
KELLEY (F. M.), explorations through the valley of the Atrato to the Pacific in search of a route for a ship-canal, 1856, 162.
*KELLY (J. O.) on a section across Slieve-na-Muck, co. Tipperary, 1857, 76.
*KEMBLE (J. M.) on Dr. Kombst's ethnographic map of Great Britain and Ireland, 1845, 81.
KEMP (Dr. G.) on the functions of the bile, 1844, 86.
—— on a natural system of organic chemistry, 1845, 31.
—— on the diseased potato tuber, 1846, 44.
KEMP (G. G.) on the waste of the Holderness coast, 1853, 53.
KENNEDY (Dr. E.) on purulent ophthalmia, 1835, 105.
KENNEDY (Rev. C. J.) on the theory of electricity, 1840, 24.
—— on the positive and negative streams

of electrified air, and an electrical machine for examining them, 1842, 19.
*KENNEDY (J.) on the lost tribes of Israel, 1854, 129.
KENNEDY (J. C. G.) on the influence of discoveries in science and works of art in developing the condition of a people, as indicated by the census operations of the United States, 1851, 108.
KENRICK (Mr.) on the statistics of Merthyr Tydvil, 1845, 90.
*—— on statistics of Darlaston, 1848, 101.
KEOGH (Mr.) on a new kind of power-loom, 1854, 156.
KETTLE (Mr.) on a submarine lamp, 1859, 236.
KHANIKOFF (M.) on his ascent of Mount Ararat, 1851, 88.
KIDD (Dr. C.) on the nature of death from the administration of anæsthetics, especially chloroform and ether, 1860, 136.
KINAHAN (G. H.) on the Valentia trap district, Ireland, 1857, 75.
KINAHAN (Prof. J. R.) on the zoological relations of the Cambrian rocks of Bray Head and Howth, 1857, 75.
—— on a new species of Galathea, 1857, 104.
—— on certain genera of terrestrial Isopoda, 1857, 104.
KINCAID (Mr.) on the Shyens and Karens of India, 1844, 84.
*KING (Mr.) on a new kitchen range, 1839, 132.
KING (Dr. R.) on the geography of the north-west coast of America, 1842, 44.
—— on the Fish river of the North Polar Sea, 1844, 58.
—— on the supposed extinct inhabitants of Newfoundland, 1844, 83.
——, notice of the manners and habits of the South Sea Islanders, from General Miller's Journal, 1845, 80.
KING (Prof. W.) on the Permian fossils of Cultra, Belfast Lough, 1853, 53.
*—— on the relation between the cleavage of minerals and the cleavage of rocks, 1857, 76.
—— on the jointed structure of rocks, particularly as developed in several places in Ireland, 1858, 83.
KINGSLEY (Mr.) on a new perspective drawing board, 1837, 135.
*KINGSLEY (J.) on the advantage of a uniform plan of gross, rather than net, returns of the revenue and savings' banks of Great Britain, 1836, 151.
—— on criminal returns of the empire, 1838, 177.
KIRK (Dr.), extracts from his letter relating to the Livingstone expedition, 1859, 185.
KIRKMAN (Rev. T. P.) on the roots of substitutions, 1860, 4.
KIRWAN (Dr. R.), eulogium on the late, by Dr. Pickells, 1843, 39.
KITSON (J., jun.) on the iron trade of Leeds, 1858, 183.
*KNIGHT (Dr.), notice of the flints of Aberdeenshire, 1834, 651.
KNIGHT (G.) on a stereoscopic cosmoramic lens, 1854, 70.
KNIGHT (H.) on a calculating instrument, 1849, 118.
KNIGHT (J.) on the rise, progress, and condition of joint-stock banks, 1854, 138.
KNIPE (J. A.) on a basaltic dyke in the vale of Eden, 1839, 67.
—— on the sandstone of the vale of Solway, and the formation of the Closeburn basin, Dumfriesshire, 1840, 98.
——, geological map of the British Isles and part of France, 1844, 55.
—— on the Tynedale coal-field and the Whin-sill of Cumberland and Northumberland, 1860, 86.
KNOWLES (E. R. J.) on an extraordinary appearance in the flame of a candle, 1846, 49.
—— on the annual consumption of coal and the probable duration of the coal-fields, 1846, 105.
—— on curious results in the water-supply afforded by a spring at Ashey Down, in the Ryde waterworks, 1859, 114.
*KNOWLES (G. B.) on a case of deformity of the pelvis, 1835, 101.
KNOWLES (Prof. G. B.) on the movements of Oscillatoriæ, 1856, 88.
KNOX (Mr.) on the effect of the moon's rays, 1852, 36.
KNOX (Dr. R.) on the natural history of the salmon, 1831–32, 595.
—— on the natural and economic history of certain species of the Clupeadæ, Coregoni, and Salmonidæ, 1846, 79.
—— on Dr. Thibert's method of modelling and colouring after nature all kinds of fishes, 1846, 80.
*—— on the classification of the Salmonidæ, 1859, 153.
*KNOX (R.) on the origin of the arts, 1860, 133.
KNOX (Rev. T.) on the insulation of fluorine, 1836, 77.
—— on the relative electro-negative powers of iodine and fluorine, 1843, 39.
—— on the amount of rain, with the different winds, at Toomavara, Limerick, during five consecutive years, 1845, 17.
KNOX (Revs. T. and H.) on the quantity of rain which falls in the S.W. of Ireland, and in Suffolk, 1843, 22.
KÖLLIKER (Prof.) on transparent fishes from Messina, 1855, 111.
—— on leucine and tyrosine in the pancreatic fluid and contents of the intestine, 1855, 124.
—— on the physiology of the spermatozoa, 1855, 125.
——, demonstration of the Trichomonas vaginalis of Donne, 1855, 125.
—— on a peculiar structure discovered in the epithelial cells of the small intestines,

together with some observations on the absorption of fat into the system, 1855, 126.
Kölliker (Prof.) on the Hectocotylus, or male of the Argonaut, 1855, 127.
*Kombst (Dr.) on ethnographical maps, 1844, 84.
Koninck (Prof. L. de) on the genus Woodocrinus, 1857, 76.
Kukla (M.) on some new kinds of galvanic batteries invented by, 1853, 44.
Kyle (John J. J.) on the chemical composition of an ancient iron slag found at Lochgoilhead, Argyleshire, 1857, 52.

Ladd (W.) on an improved induction coil, 1858, 26.
—— on a microscope with an improved magnetic stage, 1858, 143.
*—— on an improved form of air-pump for philosophical experiments, 1860, 65.
La Fuente (Don M. B.) on the province of Tarapaca, South Peru, 1853, 88.
*Laing (D.) on Smith's wire ropes, 1841, 106.
Laing (J.) on a new air-pump, 1855, 207.
*Lake (Col. A.), an original letter from General Mouravieff, 1856, 113.
Lamb (Mr.) on a mechanical apparatus for preventing incrustation of steam-boilers, 1846, 106.
Laming (Dr.) on the constitution and forces of the molecules of matter, 1846, 35.
Lamont (Dr.), account of the magnetic observatory of Munich, 1840, 26.
—— on the system of meteorological observations in Bavaria, 1840, 27.
——, account of the Munich magnetographic instruments, and observations made with the same, 1847, 25.
*Lane (Dr.) on the French language, 1847, 123.
Lang (Mr.) on vessels with safety keels, 1837, 135.
—— on improvements in ship-building, 1838, 157.
*—— on an improvement on the air-pump, 1840, 212.
*Lange (D. A.) on the progress of the Isthmus of Suez Canal, 1860, 163.
Langton (W.), abstract of the report of the Manchester Statistical Society on the state of education in the borough of Manchester, 1835, 119.
—— on the educational condition of the county of Rutland, 1839, 110.
Lankester (Dr. E.) on the formation of woody tissue, 1839, 78.
—— on the preparation of fishes for museums, 1839, 82.
—— on the white bream, 1839, 94.
—— on some coloured water from the Baltic, 1840, 143.
—— on plants and animals found in the sulphureous waters of Yorkshire, 1840, 143.
Lankester (Dr. E.) on the production of sulphuretted hydrogen by the action of vegetable matter on solutions containing sulphates, 1841, 57.
—— on deposits in springs, rivers, and lakes, from the existence of infusoria, 1841, 72.
*—— on some peculiar inorganic formations and fossils of the magnesian limestone, 1842, 55.
—— on a microscopic animal (a large species of Vorticella) found covering the stems of the Chara flexilis, 1842, 68.
—— on the occurrence of Calothrix nivea, and the infusoria of sulphureous waters, at Cove, Ireland, 1843, 77.
—— on the germination of plants, 1845, 69.
—— on the Phytelephas macrocarpa (vegetable ivory, or Tagua plant), 1845, 70.
——, notice of the woody fibres of the Lavatera arborea, with the suggestion of its use in arts and manufactures, 1846, 90.
—— on the tree which yields gutta percha, 1847, 86.
—— on some vegetable monstrosities illustrating the laws of morphology, 1848, 85.
—— on some abnormal forms of the fruit of Brassica oleracea, 1849, 71.
—— on the epidermal appendages of the genera Callitriche, Hippuris, Pinguicula, and Drosera, 1850, 113.
—— on a monstrosity of Lathyrus odoratus, 1851, 72.
—— on the theory of the formation of wood and the descent of the sap in plants, 1851, 72.
——, notice of jelly fishes, 1853, 69.
——, report of the committee for registration of the periodic phenomena of plants and animals, 1853, 70.
—— on photographic plates and illustrations of microscopic objects in natural history, 1853, 70.
——, British freshwater polyps, 1853, 70.
——, notice of Mr. Dempster's dredge, 1855, 118.
——, exhibition of photographs on glass, of histological and natural-history objects by Dr. Redfern, 1855, 118.
—— on the alternation of generations and parthenogenesis in plants and animals, 1857, 113.
—— on an instrument for measuring the constant intensity of ozone, 1858, 52.
——, notice of drawings of British spiders to illustrate Mr. Blackwall's work, 1859, 150.
*Lanza (Signor) on the formations of Dalmatia, 1855, 83.
Larcom (Capt.) on contour maps, 1843, 18.
—— on the report of the census of Ireland for 1841, forwarded to the Association by the Lord Lieutenant, 1843, 91.

*Lardner (Rev. Dr.) on railroads, 1835, 108.
—— on steam communication with the East Indies and North America, 1836, 130.
—— on the effect of railroads on intercommunication, 1836, 150.
—— on the resistance to railway trains, 1837, 132.
—— on the application of steam to long voyages, 1837, 136.
—— on an apparatus for use in working railways, 1839, 129.
Lassell (W.) on a method of supporting a large speculum, free from sensible flexure, in all positions, 1850, 180.
Latham (Dr. R. G.) on the southern limits of the Esquimaux race in America, 1844, 78.
—— on the ethnography of Africa as determined by its languages, 1844, 79.
—— on the eastern limits of the Australian race and language, 1844, 80.
—— on the ethnographical position of certain tribes of the Garrow Hills, 1844, 80.
—— on the increase of the ergot upon grasses, 1845, 75.
—— on the ethnography of the Chinese and Indo-Chinese nations, 1845, 77.
—— on the ethnography of America, 1845, 77.
—— on the state of philological evidence as to the unity of the human race, 1845, 78.
—— on ethnological philology, 1846, 115.
—— on a vocabulary of the Bethuck Indians of Newfoundland, 1846, 115.
—— on a Comanche vocabulary, 1846, 117.
—— on the Shyenne numerals, 1847, 123.
—— on a Moskito grammar and vocabulary, 1847, 123.
—— on a Botocudo vocabulary, 1847, 123.
—— on some Tumali words from Dr. Tutschek's vocabulary, 1847, 123.
—— on some Fazoglo words from Dr. Tutschek's vocabulary, 1847, 124.
—— on the terms Gothi and Getæ, 1849, 85.
*—— on the ethnographical philology of Africa, 1849, 85.
—— on the transition between the Tibetan and Indian families in respect to conformation, 1849, 85.
—— on the original distribution of the Germanic, Lithuanic, and Slavonic populations, 1850, 141.
—— on the ethnological position of the Brâhui, and on the languages of the Paropamisus, 1851, 89.
—— on certain localities not in Sweden occupied by Swedish populations, and on certain ethnological questions connected with the coasts of Livonia, Esthonia, Courland, and Gothland, 1853, 86.
—— on the traces of a bilingual town (Danish and Angle) in England, 1853, 88.
Latham (Dr. R. G.), ethnological remarks upon the Zulus, Earthmen, Australians, and Astecs, 1853, 88.
—— on the non-Russian populations of Russia in Europe, 1854, 129, 139.
—— on the distribution of the Albanians, politically, 1856, 145.
—— on the general distribution of the varieties of language and physical conformation, 1858, 151.
—— on the Jaczwings, 1860, 163.
Latto (J.) on incombustible cloth, 1849, 33.
Laurent's (M.) attempt to explain the phenomena of circular polarization in liquids, Prof. MacCullagh on, 1844, 7.
Lawes (J. B.) on agricultural chemistry, especially in relation to the mineral theory of Baron Liebig, 1851, 45.
*—— on the equivalency of starch and sugar in food, 1854, 70.
—— on the amounts of, and methods of estimating, ammonia and nitric acid in rain-water, 1854, 70, 164.
—— on some points connected with agricultural chemistry, 1856, 172.
—— on the composition of wheat-grain, and its products, 1856, 173.
—— on the assimilation of nitrogen by plants, 1857, 51.
—— on the annual yield of nitrogen per acre in different crops, 1858, 52.
—— on the effects of different manures on the composition of the mixed herbage of meadow-land, 1859, 70.
*—— on the composition of the ash of wheat, 1860, 70.
Lawrance (T.) on the whale and seal fisheries of Greenland and Davis Straits, carried on by vessels from Peterhead, 1859, 216.
Lawrie (Dr.) on the results of amputations, 1840, 163.
Lawson (Prof.) on the connexion between statistics and political economy, 1843, 94.
Lawson (G.) on the stipular glands of Rubiaceæ, 1854, 99.
Lawson (H.) on a thermometer stand, 1845, 17.
—— on an easy method of contracting the aperture of a large telescope, 1846, 9.
—— on the arrangement of a solar eye-piece, 1846, 9.
—— on spots in the sun, 1847, 9.
Lawton (W.) on the meteorology of Hull, 1853, 27.
Laycock (Dr. T.) on a general law of vital periodicity, 1842, 81.
—— on the observation of periodic changes in animals, 1844, 70.
—— on the reflex function of the brain, 1844, 85.
—— on the addition to vital statistics contained in first report of the Commissioners of inquiry into circumstances affecting the health of towns, 1844, 90.

LAYCOCK (Dr. T.) on the sanitary condition (1839–1843) of York, 1844, 90.
—— on the communicating fibres of the brain in reference to thought and action, 1845, 84.
—— on the vital statistics of America, 1845, 90.
——, notice of diagrams showing the mortality of diarrhœa concurrently with progressive increase of temperature in London, 1846, 94.
—— on diseases resulting from the immoderate use of tobacco, 1846, 94.
*—— on the statistics of sickness and mortality in the city of York, 1846, 104.
—— on the physiology of cells in relation to consciousness and adaptive movements, 1854, 110.
*——, handwriting and drawing of the insane, as illustrative of some modes of cerebral functions, 1859, 265.
LEA (I.) on traces of a fossil reptile (Sauropus primævus) found in the old red sandstone, 1849, 56, 134.
LEACH (Capt.) on the use of percussion lights for preventing collisions at sea and on railways, 1857, 181.
LEADBETTER (Mr.) on the normal school of Glasgow, 1840, 170.
LEAHY (P.) on a method of ascertaining inaccessible distances at sea or land, 1843, 101.
LEATHAM (Mr.) on the bill circulation of Great Britain, 1840, 184.
*LEATHAM (W.) on the state of the lodging-houses for the travelling poor in the towns and villages of England, 1843, 96.
LEE (Dr. J.), meteorological communications from Norway, 1844, 27.
——, remarks on presenting two papers, entitled "meteorological observations made at Christiania," and "on the lightning and thunder at Alten," 1845, 19.
——, tables of meteorological observations made at Christiania and Alten, presented by, 1846, 12.
—— on the advantages to be derived from the establishment of a magnetic and electro-meteorological observatory at Alten in Lapland, 1847, 34.
—— on meteorological observations continued at Alten in Finmark, 1848, 32.
—— on meteorological observations made at Kaafjord, near Alten, in Western Finmark, and at Christiania in Norway, 1849, 18; 1850, 36.
—— on the British Meteorological Society, 1850, 42.
*—— on the Alten and Christiania meteorological observations, 1851, 33.
—— on photographic drawings of meteorological instruments, 1854, 47.
——, notice of photographs of Hartwell observatory, and of the Craig telescope at Wandsworth, 1855, 12.
LEE (Dr. J.) on Negretti and Zambra's mercurial minimum thermometer, 1856, 40.
——, remarks on Dr. H. Barker's pamphlet on the relative value of the ozonometers of Dr. Schönbein and Dr. Moffat, 1856, 40.
—— on the discovery of the asteroid, No. 46, by Mr. Pogson, 1857, 31.
—— on a new variable star (R. Sagittarii), discovered by Mr. Pogson, 1858, 29.
—— on the results of the measures of Gamma Virginis for the epoch 1858, as determined by Admiral Smyth, 1858, 29.
—— on the daily comparison of an aneroid barometer with a Board of Trade barometer by captains of ships at sea, 1858, 38.
——, prospectus of the Hartwell variable star Atlas, 1860, 36.
*LEE (J. C.), notice of a meteorological journal kept at Nassau, New Providence, 1841, 32.
*LEE (J. E.) on an elephant's grinder from the Cerithium limestone, 1856, 69.
*—— on some fossil fishes from the strata of the Moselle, 1856, 69.
LEESON (Dr. H. B.) on the influence of galvanism on endosmose and exosmose, 1845, 83.
*——, apparatus for minute injection, 1845, 86.
—— on crystallography and a new goniometer, 1846, 46.
*LEICESTER (Lieut.) on the volcanic group of Milo, 1851, 89.
*LEICHARDT (Dr.), expedition to the interior of central Australia in search of, 1852, 112.
LEIGH (Dr.) on a new product obtained from coal naphtha, 1842, 39.
—— on the action of nitric acid on naphtha, 1844, 33.
LEITCH (Rev. W.) on the development of sex in social insects, 1855, 111.
LEITHART (J.) on the stratification of rocks, 1838, 88.
—— on faults, and anticlinal and synclinal axes, 1838, 89.
LEITHEED (W.) on a new safety lamp, 1837, 131.
LEMON (Sir C.) on the agricultural products of Cornwall, 1841, 83.
*LESLIE (Prof.) on professional incomes, 1857, 163.
*—— on competition at the Bar, 1857, 163.
LETHEBY (H.) on the action of oxalic acid upon the dead tissues of the animal body, 1846, 41.
—— on the difference in the physiological actions of the yellow and red prussiates as an evidence of their containing dissimilar radicals, 1846, 41.

*Le Verrier (Prof.) sur les comètes périodiques de Lexel de Faye et de Vico, 1847, 19.
Lewes (G. H.), the spinal cord a sensational and volitional centre, 1858, 135.
—— on the necessity of a reform in nerve-physiology, 1859, 166.
—— on a demonstration of the muscular sense, 1859, 167.
—— on the supposed distinction between sensory and motory nerves, 1859, 168.
Lewis (Rev. T. T.), discovery of rippled surfaces and trails of animals in the old red sandstone, 1854, 91.
*Lewis (Dr.) on a hydro-spirometer, 1860, 139.
Liddell (A.) on the statistics of education in Glasgow, 1846, 101.
Liebig (Prof.) on the products of the decomposition of uric acid, 1837, 38.
—— on poisons, contagions, and miasms, 1840, 72.
——, new process for preparing murexide, 1840, 74.
—— on some results obtained in his laboratory, 1841, 53.
—— on mineral manure, 1845, 39.
—— on a new form of cyanic acid, 1855, 64.
——, notice of a new mode of making bread, 1855, 64.
——, exhibition of a large bar of aluminium, 1855, 64.
*Lille (Comte de) on laying down wood pavement, 1840, 211.
Lindelöf (Prof.) on the calculus of variations, 1859, 5.
—— on the caustics produced by reflexion, 1860, 14.
Lindley (Dr.) on the structure and affinities of the Orobanchaceæ, 1837, 101.
*Lindsay (Dr. A. L.) on the commercial uses of lichens, 1855, 64.
Lindsay (J. B.) on a telegraph for communicating across rivers and seas, without employing a submerged cable, 1854, 157.
—— on the transmission of electricity through water, 1859, 13.
—— on Chinese astronomy, 1859, 35.
Lindsay (Dr. W. L.) on the genus Abrothallus, 1856, 88.
—— on the action of hard waters upon lead, 1858, 54.
—— on the eruption in May 1860 of the Kötlugjá volcano in Iceland, 1860, 86.
Lister (Rev. W.) on reptilian footprints from the new red sandstone, north of Wolverhampton, 1860, 87.
Litton (Dr.) on the yew at Mucruss, 1835, 76.
*Livingstone and Oswell (Messrs.), explorations in South Africa to the north of lake N'gami, 1852, 112.
Livingstone (Dr.), his arrival at Loanda on the west coast of Africa, 1854, 119.
Livingstone (Dr.), letter to the Rev. Dr. Tidman, from Sekeletu, Linyanti, 1854, 121.
——, notice of his journey across tropical Africa, 1855, 148.
——, return journey across South Africa, 1856, 113.
*—— on discoveries in Southern Africa, 1857, 146.
—— on the discoveries in South-Central Africa, 1860, 164.
Lizars (Dr.) on the organs of sense in the salmon, 1840, 134.
*Lloyd (Colonel) on the mines of Copiapo, 1853, 53.
*Lloyd (Dr.) on the purification of large towns by means of dry cloacæ, 1857, 53.
Lloyd (Dr. G.) on the Marsileaceæ, 1836, 102.
—— on the geology of Warwickshire, 1839, 73.
—— on a new species of Labyrinthodon from the new red sandstone of Warwickshire, 1849, 56.
Lloyd (Rev. Dr. H.) on conical refraction, 1833, 370.
——, account of magnetical observations in Ireland, and of a new method of observing the dip and the force with the same instrument, 1834, 557.
—— on the direction of the isoclinal lines in England, 1836, 31.
——, account of the magnetical observatory at Dublin, 1837, 20.
—— on the best position of three magnets, in reference to their mutual action, 1839, 12.
—— on the phenomena of thin plates in polarized light, 1841, 26.
—— on simultaneous changes of the magnetic elements at different stations, 1841, 26.
—— on the method of graphical representation, as applied to physical results, 1843, 4.
—— on the phenomena of metallic reflexion, 1843, 6.
—— on the regular variations of the direction and intensity of the earth's magnetic force, 1843, 12.
—— on the periodicity of magnetic disturbances, 1845, 12.
—— on the mean results of observations, 1848, 1.
—— on the meteorology of Ireland, 1852, 26.
—— on the affections of polarized light reflected and transmitted by thin plates, 1859, 14.
Locke (John), excessive emigration and its reparative agencies in Ireland, 1852, 118.
——, Ireland's recovery; or, excessive emigration and its reparative agencies, 1853, 107.
—— on the agricultural labourers of England and Wales, their inferiority in the

social scale, and the means of effecting their improvement, 1855, 171.
Locke (John), a new route to India—the Syro-Arabian railway, 1856, 114.
——, the land-revolution in Ireland, 1857, 163.
Lockhart (W.) on the Yang-tse-Keang and the Hwang-ho, or Yellow River, 1858, 152.
—— on the mountain districts of China and their aboriginal inhabitants, 1860, 168.
Locking (G.), description of Locking and Cook's patent rotatory valve-engine, 1853, 120.
Logan (Mr. W. E.) on the South Welsh coal basin between the Vale of Neath and Carmarthen Bay, 1837, 83.
—— on the age of the copper-bearing rocks of Lakes Superior and Huron, and on the physical structure of Canada, 1851, 59.
Long (Mr.), description of a cave at Cheddar, 1838, 85.
*—— on crag formations and coprolites, 1852, 53.
Longchamps (E. de Selys), projet d'observations annuelles sur la périodicité des oiseaux, 1841, 73.
*—— on the genus Arvicola, on the Libellulidæ of Europe, and on hybrids of the genus Anser, 1845, 62.
*—— on obtaining accurate dates for the appearance, &c. of birds, the migration of fishes, the budding, &c. of plants, 1845, 62.
Longmuir (Rev. Dr.), notice of a fossil fish, 1859, 114.
—— on the section of the coast between the Girdleness and Dunnottar Castle, 1859, 261.
—— on the remains of the cretaceous formation, &c. in Aberdeenshire, 1859, 262.
—— on the restoration of Pterichthys in 'The Testimony of the Rocks,' 1859, 263.
Lonsdale (Dr. H.), notice of an ossified tendo Achillis, and of a case of exostosis, 1840, 165.
Loomis (Prof.) on the relative accuracy of the different methods of determining geographical longitude, 1857, 25.
—— on certain electrical phenomena in the United States, 1857, 32.
Lothian (Mr.) on a revolving balance, 1840, 206.
Lothian (J.) on a triple differential wheel, 1847, 18.
Lovén (Prof.) on the bathymetrical distribution of submarine life on the north shores of Scandinavia, 1844, 50.
Lowe (E. J.) on meteors, 1849, 24.
——, observations on zodiacal light, 1851, 24.
—— on some unusual phenomena, 1851, 33.
—— on the land and freshwater mollusca found near Nottingham, 1851, 80.
Lowe (E. J.) on the force of the wind in July and August 1855, as taken by the "atmospheric recorder" at the Beeston observatory, 1855, 40.
—— on a singular mortality amongst the swallow tribe, 1855, 112.
—— on the temperature of the flowers and leaves of plants, 1859, 135.
Lowe (G.) on some new chemical products obtained in gas-works, 1834, 582.
—— on crystals of iron pyrites, 1836, 77.
*—— on the purification of coal-gas by the application of water in an instrument called "the scrubber," 1853, 45.
Lowman (Mr.), on the orthochronograph invented by, 1844, 14.
Lubbock (J.) on the development of Buccinum, 1860, 39.
Lubbock (Sir J. W.) on new empirical tables for finding the moon's place, 1836, 12.
—— on M. Poisson's theory of the constitution of the atmosphere, 1837, 31.
—— on the calculation of the perturbations of planets and comets, 1847, 9.
Lucas (P. B.) on two new fasciæ connected with the muscles of the human eye, 1841, 80.
*Lucas (W.) on the production of an artificial copper pyrites, 1842, 40.
—— on the limestones of Yorkshire, 1844, 30.
—— on the alteration in iron exposed to long-continued vibration, 1844, 41.
Lütke (Admiral), notice of tide observations by, 1839, 11.
Lyell (Sir C.) on the change of level of the land and sea in Scandinavia, 1834, 652.
*—— on the fossil shells of the Suffolk crag, 1835, 63.
—— on certain phenomena connected with the junction of granite and transition rocks in Norway, 1837, 67.
—— on vertical lines of flint, 1838, 87.
—— on the origin of the tubular cavities filled with gravel and sand, called sand-pipes, in the chalk near Norwich, 1839, 65.
—— on remains of mammalia in the crag and London clay of Suffolk, 1839, 69.
—— on two species of shells of the genus Conus, in the lias or inferior oolite, near Caen, in Normandy, 1840, 110.
—— on ancient sea-cliffs and needles in the chalk of the valley of the Seine in Normandy, 1840, 111.
—— on the delta and alluvial deposits of the Mississippi, and other points in the geology of North America, 1846, 117.
—— on the occurrence of a stratum of stones covered with barnacles in the red crag at Wherstead, near Ipswich, 1851, 65.
——, introductory address as President of

the Geological Section:—On the occurrence of works of human art in post-pliocene deposits, 1859, 93.
LYELL (Sir C.), notice of Dr. Dawson's confirmation of the discovery of a land shell, or Pupa, in the coal formation of Nova Scotia, 1859, 95.
LYNCH (Lieut.) on the ascent of the river Euphrates, 1838, 99.
LYON (Rev. C. F.) on some phenomena of mirage on the east coast of Forfarshire, 1850, 42.
LYONS (Prof.) on the importance of introducing a new and uniform standard of micrometric measurement, 1857, 115.
——, notice of Dr. Hardy's instrument for the local application of chloroform, 1857, 115.

MACADAM (J.) on the fossiliferous beds of the counties of Antrim and Down, 1852, 53.
MACADAM (Dr. STEVENSON) on the central heat and density of the globe, as also the causes of volcanic phenomena, 1850, 88.
—— on the presence of lead in hydrochloric and nitric acids, 1854, 72.
—— on the distribution of iodine in the mineral, vegetable, and animal kingdoms, 1854, 72.
—— on the cause of the phenomena exhibited by the Geysers of Iceland, 1854, 73.
—— on the chemical composition of the waters of the Clyde, 1855, 64.
—— on the detection of strychnine, 1856, 55.
—— on an improved electric lamp invented by Mr. W. Hart, 1858, 55.
*—— on M. de Luca's claim to be the discoverer of the non-presence of iodine in the atmospheric air, rain-water, and snow, 1858, 56.
—— on the production of a frosted surface on articles made of aluminium, 1858, 56.
*—— on the analysis and valuation of manures, 1859, 72.
M'ALISTER (Rev. J.), statistical notices of the blind asylum at Newcastle-upon-Tyne, 1838, 167.
M'ANDREW (R.), dredging the coasts of Anglesea, 1844, 63.
—— on some animals new to the British seas, 1844, 64.
——, notice of a Medusa caught by, 1845, 65.
——, additions to the marine fauna of Britain discovered by, 1845, 66.
——, crustacea found in cruising round the British coast, 1846, 80.
*—— on some marine animals from the Bristol Channel, 1848, 125.
——, notice of zoophytes, mollusca, &c., observed on the coast of Norway, 1855, 113.
MACARTNEY (Dr.) on the natural history of the common toad, 1833, 441.
—— on the structure and functions of the nervous system, 1833, 449.
—— on the organ of voice in the New Holland ostrich, 1836, 97.
—— on the means of preserving animal and vegetable substances, 1836, 99.
—— on the structure of the teeth, and account of their decay, 1836, 115.
—— on means to suppress hæmorrhage from arteries, 1839, 97.
—— on rules for finding with exactness the position of the principal arteries and nerves, 1839, 102.
M'BAIN (Dr. J.) on a skull of a manatee from Old Calabar, 1859, 150.
*—— on the duration of life in the Actinia mesembryanthemum when kept in confinement, 1859, 152.
*—— on the skull of a wombat from the bone-caves of Australia, 1859, 152.
*—— on the skull of a seal from the Gulf of California, 1859, 153.
MACCAIRE (Prof.) on the directions of plants as influenced by light, 1847, 55.
M'CALLUM (Rev. A. K.) on juvenile delinquency—its principal causes and proposed cure, as adopted in the Glasgow Reformatory Schools, 1855, 173.
M'CLELLAND (J.) on measures relating to the adoption of the family and agricultural system of training in the reformation of criminal and destitute children, 1855, 179.
*M'COMBIE (Hon. T.) on the aboriginals of Australia, 1859, 186.
—— on the statistics of the trade and progress of the colony of Victoria, 1859, 218.
*M'CORMAC (Dr. H.) on the connexion of atmospheric impurity with disease, 1852, 119.
—— on the origin of tubercular consumption, 1855, 131.
*—— on the influence of inadequate or perverted development in the production of insanity, disease, want, and crime, 1857, 164.
M'COSH (Rev. Prof.), morphological analogy between the disposition of the branches of exogenous plants and the venation of their leaves, 1852, 66.
—— on the morphology of pines and firs, 1854, 99.
—— on the correspondence between the leaf-venation and ramification of the plant, 1854, 100.
—— on some traces of harmonious colours in plants and the plumage of birds, 1854, 101.
M'COY (F.) on the plants of the New South Wales and Van Diemen's Land coal-fields, 1847, 64.
——, list of organic remains in the frontier chain of Scotland, 1850, 107.

M'Coy (F.) on the mode of succession of the teeth in Cochliodus, 1852, 55.
*—— on the subdivisions of Leptæna, 1852, 55.
—— on the structure of certain fossil fishes found in the old red sandstone of the north of Scotland, 1852, 55.
M'Craw (W.) on a new process in photography, 1858, 18.
*MacCullagh (Prof. J.), notice of his memoir on the attractions of spheroids, 1831–32, 545.
—— on the laws of reflexion and refraction from crystallized surfaces, 1835, 7.
—— on the laws of double refraction in quartz, 1836, 18.
*—— on the mathematical expressions which lead to an explanation of all the ordinary phenomena in optics, 1842, 12.
——, address as President of Section A, 1843, 1.
—— on the theory of total reflexion, and of the insensible refraction which accompanies it, 1843, 4.
——, remarks on Sir D. Brewster's paper on the ordinary refraction of Iceland spar, 1843, 7.
—— on M. Laurent's attempt to explain the phenomena of circular polarization in liquids, 1844, 7.
*M'Culloch (D.) on the statistics of the province of Nova Scotia, 1852, 119.
M'Dermott (Mr.) on a new railway brake, 1854, 157.
*Macdonald (Dr.) on mnemonics, 1840, 157.
Macdonald (J.) on the form and dimensions of the human body, as ascertained by a universal measurer or andrometer, 1855, 127.
*Macdonald (J. D.) on the homologies of the coats of Tunicata, with remarks on the physiology of the "pallial sinus" system of Brachiopoda, 1859, 170.
Macdonald (Dr. W.) on the structure of fishes, so far as the analogies can be traced between the limbs of the mammals and the fins of fishes, 1840, 131.
—— on the unity of organization as exhibited in the skeleton of animals, 1845, 62.
—— on cranial vertebræ, 1845, 85.
—— on the erroneous division of the cervical and dorsal vertebræ, and the connexion of the first rib with the seventh vertebra, and the normal position of the head of the rib in mammals, 1848, 89.
*—— on the external antennæ of the Crustacean and Entomoid class, 1849, 78.
*—— on the course of the blood in the circulation of the human fœtus in the normal development, 1849, 78.
*—— on the antennæ of the Annulosa, and their homology in the Macrourals, 1851, 81.
—— on the vertebral homologies in animals, 1855, 128.
*Macdonald (Dr. W.) on the preadamitic condition of the globe, 1855, 148.
*—— on the structure of shell mortars without touch-hole, to be discharged by galvanic circuit, 1855, 207.
*—— on the cranium of osseous fishes and its vertebrate and articulate homologies, 1857, 104.
*—— on the sources and origins of human races and their languages, more especially the Celtic, 1857, 146.
*—— on the osteology of Lophius piscatorius, 1859, 265.
M'Donnell (Dr.) on the differential pulse, 1835, 98.
Macdonnell (A.) on the atomic weight of magnesium, 1852, 36.
*M'Donnell (J.) on the action of air on alkaline arsenites, 1859, 74.
M'Donnell (Dr. R.) on the valvular apparatus connected with the vascular system of certain abdominal viscera, 1857, 115.
—— on the formation of sugar and amyloid substances in the animal economy, 1860, 129.
MacDouall (Prof.) on Medo-Persic philology, 1852, 90.
M'Dowall (P.) on the statistics of Ramsbottom, 1838, 168.
*M'Evers (Dr.) on a peculiar case of sterility, 1843, 87.
M'Farland (Mr.) on the Fata Morgana of Ireland, 1852, 29.
M'Farlane (P.) on a new construction of barometer, 1840, 55.
M'Gauley (Rev. J. W.) on the application of magnetism as a moving power, and remarks on the nature of magnetism, 1835, 20.
——, experiments in electro-magnetism, in its application as a moving power, 1836, 24.
—— on an electro-magnetic apparatus for the production of electricity of high intensity, 1837, 24.
—— on a new rotary engine, 1849, 118.
Macgillivray (W.) on the central portion of the great mountain range of the south of Scotland, 1834, 650.
——'s "Natural History of Deeside and Braemar," notice of, 1855, 118.
*M'Gowan (Dr.) on certain phenomena attendant on volcanic eruptions and earthquakes in China and Japan, 1859, 115.
*—— on the cultivation of the opium poppy of China, 1859, 136.
*—— on the native inhabitants of Formosa, 1859, 186.
*—— on Chinese genealogical tables, 1859, 186.
*—— on the trade currency of China, 1859, 223.
*—— on the ante-Christian settlement of the Jews in China, 1860, 170.
M'Gregor (Mr.) on carbonic acid thrown off from the lungs, 1840, 87.

MACGREGOR (J.), early methods of propelling ships, 1857, 182.
MACINTOSH (J.) on the application of combustible compounds to be used in war, 1858, 214.
—— on constructing and laying telegraph cables, 1858, 214.
MACKAY (Mr.), notice of communication from Mr. J. Nuttall, on the management of the Pine tribe, 1836, 104.
—— on the Irish Saxifrages, 1843, 78.
MACKAY (Dr.) on Matias bark, 1839, 61.
—— on the chemical and medicinal properties of the Matias bark, 1840, 160.
MACKAY (Dr. J. T.) on the treatment and flowering of a plant of Dracæna draco, or gum-dragon tree, 1850, 114.
MACKAY (K.) on a double monocephalic human monster, 1840, 163.
MACKENZIE (J. T.) on the trade and commerce of India, 1859, 217.
*MACKFIE (W. A.) on the patent laws, 1856, 164.
MACKIE (D.) on the tides of Dundee and Glasgow, 1837, 5.
MACKINTOSH (Dr.) on cholera, 1837, 107.
—— on morbid preparations relating to dysmenorrhea, 1837, 107.
—— on diseased lungs from sand respired, 1837, 108.
MACKWORTH (H.) on the metra, 1855, 207.
MACLAGAN (Dr.) on the oil of assafœtida, 1845, 33.
—— on the composition of bread, 1855, 66.
MACLAREN (A.) on the influence of systematized exercise on the expansion of the chest, 1860, 142.
MACLAREN (C.) on the geology of the Pentland Hills, 1834, 649.
—— on the striated rocks of the Corstorphine Hills near Edinburgh, Sir R. Murchison's notice of, 1842, 54.
—— on traces of ancient glaciers in Glenmessan, 1850, 90.
*—— on the excavation of certain river channels in Scotland, 1855, 83.
MACLEAN (J.) on the submersion of electric cables, 1858, 215.
MACLEAY (W. S.), notice of some rare coleopterous insects from the collection of Mr. Melly, 1837, 100.
——, notice of wood penetrated by Limnoria terebrans, 1837, 100.
MACLEOD (Lieut. L.) on the expedition to ascend the Niger to its source, 1852, 112.
M'LEOD (J. LYONS) on the resources of Eastern Africa, 1859, 188.
M'NAMARA (Dr.) on coloured confectionary, 1857, 55.
M'NERNEY (Mr.), statistics of poor relief and movement of population in the "commercial district" in the hundred of Wirral, Cheshire, 1854, 142.
MACONOCHIE (Capt.) on the physical character and geology of Norfolk Island, 1844, 57.
MACONOCHIE (Capt.) on the statistics of the criminal population of Norfolk Island, 1844, 93.
MACPHERSON (Dr. D.), researches in the Crimean Bosphorus, and on the site of the ancient Greek city of Panticapæum, (Kertch), 1856, 115.
M'PHERSON (R.), process for obtaining photolithographs, &c., 1855, 69.
MACVICAR (Rev. Dr. J. G.) on electricity, 1833, 390.
—— on the possibility of representing by diagrams the principal functions of the molecules of bodies, 1855, 66.
—— on the philosophy of physics, 1859, 59.
—— on the organic molecules and their relations to each other, and to the medium of light, 1859, 72.
M'WILLIAM (Dr. J. O.) on the use of the Bofareira (Ricinus communis) as a means adopted by the natives of the Cape de Verd islands to excite lactation, 1850, 132.
MADDEN (Dr.) on the connexion between the nerves and muscles, 1837, 106.
MADDEN (Major E.) on the botanical geography of part of the Himalaya and Thibet, 1851, 72.
*MAERTEN (C. VANDER) on the progress of free trade on the Continent, 1857, 164.
—— on free trade in Belgium, 1858, 184.
*MAIR (R.) on an application of galvanic power to machinery, 1855, 208.
MALCOLM (Dr. A. G.) on the sanitary state of Belfast, with suggestions for its improvement, 1852, 119.
—— on the influence of factory life on the health of the operative, 1855, 171.
MALCOLM (Admiral Sir C.) on a meteor seen in India, 1849, 24.
MALLET (Prof. J. W.) on the atomic weight of aluminium, 1857, 53.
——, notice of Prof. Tuomey's geological map of Alabama, 1857, 78.
MALLET (R.) on the application of electromagnetism to manufactures, 1835, 18.
—— on bleaching turf for the manufacture of paper, 1835, 47.
—— on phenomena of flame from coal-gas, 1835, 49.
—— on the formation of crystallized metallic copper in Cronebane copper mine, and of native sulphate of iron and copper, 1837, 47.
—— on the mechanism of the movement of glaciers, 1837, 64.
—— on the power of aged trees to reproduce themselves, 1837, 102.
—— on a new case of the chemical action of light in the decoloration of recent solutions of caustic potass of commerce, 1838, 61.
—— on the construction of the 36-inch mortars made by order of Her Majesty's Government, 1857, 186.
MANTELL (Dr. G. A.) on the zoological characters of the Wealden formation, 1831–32, 587.

MANTELL (Dr. G. A.), notice of reptilian remains, 1836, 94.
—— on a newly discovered species of Unio, 1844, 42.
—— on the upper jaw of the Iguanodon, 1850, 125.
MARCET (Dr. W.) on the action of alcohol on the nervous system, 1859, 170.
*MARCH (Dr.) on a screw-vent for turning spiked guns into use, 1855, 208.
MARIANINI (Prof. STEFANO), letter to the Secretaries, with abstract of his memoir on the magnetizing action of transitory electric currents, 1842, 27.
MARKHAM (C. R.) on the final Arctic searching expedition, 1857, 146.
*—— on the navigation of the Ucayali, an affluent of the Amazons, 1858, 153.
*MARRATT (F. P.) on some new mosses, 1854, 102.
MARRATT (W.) on the discovery of an ichthyosaurus near Tewkesbury, 1839, 70.
MARSHALL (Dr. J. D.) on the zoology of Rathlin, 1835, 68.
——, notice of Bonaparte's Gull, Sabine's Gull, Little Auk, &c. shot near Belfast, 1852, 77.
MARSHALL (J. G.), description of a section across the Silurian rocks in Westmoreland, 1839, 67.
—— on the geology of the Lake District in reference especially to the metamorphic and igneous rocks, 1858, 84.
—— on the history of flax-spinning in England, especially as developed in the town of Leeds, 1858, 184.
MARTIN (Dr.) on the moral and intellectual character of the New Zealanders, 1845, 78.
MARTIN (T.) on certain properties of the radii of curvature of curves and surfaces, and their application to the method of polar reciprocation, 1857, 4.
MARTINS (Dr. C.) on the six climates of France, 1850, 46.
——, parallel between the superficial deposits of the basin of Switzerland and those of the valley of the Po in Piedmont, 1850, 90.
MASKELYNE (N. S.) on the bearings of photography on chemical philosophy, 1847, 56.
MASTERS (M. T.) on the arrangement of the air-canals in the Nymphæaceæ (waterlilies), 1854, 102.
—— on an abnormal growth in a rosewood tree, 1856, 90.
*——, contributions to vegetable teratology, 1857, 97.
—— on vegetable morphology and the theory of the metamorphosis of plants, 1859, 136.
—— on the normal and abnormal variations from an assumed type in plants, 1860, 112.
MATTEUCCI (M.), experiments on electrophysiology, 1844, 38.
——, experiments on the amount of work realized from the consumption of a given quantity of zinc acting on the limbs of an animal, and on the same quantity employed to work an inorganic machine, 1844, 38.
MATTEUCCI (M.), researches in electro-physiology, 1846, 28.
—— on the electrization of needles in different media, 1846, 46.
—— on the conductibility of the earth, 1850, 56.
—— on the laws of magnetism and diamagnetism, 1852, 6.
—— on the distribution of electrical currents on the rotating disc of M. Arago, 1853, 5.
*—— on the magnetism of rotation developed in very small insulated metallic particles, 1853, 6.
—— on the magnetism of rotation in masses of crystallized bismuth, 1853, 6.
MATTHEWS (W.), photographs exhibited of the quarry of Rowley Rag at Ponk Hill, Walsall, 1858, 93.
MATTHIESSEN (Dr. A.) on the metals of the alkaline earths, 1855, 66.
—— on the combustibility and other properties of the rarer metals, 1858, 57.
MAUGHAM (W.) on obtaining an increase of atmospheric pressure, and on liquefying hydrogen and oxygen gases, 1838, 73.
—— on a new compound of carbon and hydrogen, 1858, 72.
MAULE (Mr.) on a substitute for the forcing-pump in supplying steam-boilers, 1858, 163.
MAUNSELL (Dr. H.) on the statistics of the Dublin Foundling Hospital, 1835, 113.
MAURY (Capt.) on wind and current charts of the North Atlantic, 1848, 34.
—— on antarctic expeditions, 1860, 44.
—— on the climates of the antarctic regions, 1860, 46.
MAXWELL (Prof. J. C.) on a method of drawing the theoretical forms of Faraday's lines of force without calculation, 1856, 12.
—— on the unequal sensibility of the foramen centrale to light of different colours, 1856, 12.
—— on the theory of compound colours with reference to mixtures of blue and yellow light, 1856, 12.
—— on an instrument to illustrate Poinsot's theory of rotation, 1856, 27.
—— on the dynamical theory of gases, 1859, 9.
—— on the mixture of the colours of the spectrum, 1859, 15.
—— on an instrument for exhibiting the motions of Saturn's rings, 1859, 62.
—— on the results of Bernoulli's theory of gases as applied to their internal friction, their diffusion, and their conductivity for heat, 1860, 15.
—— on an instrument for exhibiting any

mixture of the colours of the spectrum, 1860, 16.
MAY (C.) on railway chairs and compressed wood fastenings, 1851, 114.
—— on the application of chilled cast iron to the pivots of astronomical instruments, 1851, 114.
*MAY (D.), journey in the Yoruba and Nupé countries, 1860, 170.
MAYER (ENRICO) on the infant industrial schools of Tuscany, 1843, 93.
*MAYES (Sergeant W.), meteorological observations made at Aden, 1844, 22.
——, meteorological observations made at Aden, 1846, 26.
——, meteorological observations taken at Fort George Barracks, Bombay, 1846, 26.
MAYNE (Rev. C.) on preserving Echinodermata, 1835, 71.
MELLONI (M.), experiments on radiant heat, 1833, 381, 382.
MELVILLE (Dr. A. G.) on the Lepidosiren, 1847, 78.
MENEGHINI (Prof. C. G.) on the advances of palæontological discovery in Tuscany, 1857, 79.
MENTEATH (C. G. S.) on the limestone of Closeburn, 1834, 651.
MERCER (J.) on some peculiar instances of (so-called) catalytic action, 1842, 32.
—— on the solvent power of solutions of acetates, 1844, 32.
—— on a new method of contracting the fibres of calico, and of obtaining on the calico thus prepared colours of much brilliancy, 1851, 51.
—— on chromatic photographs, 1858, 57.
—— on the relation of the atomic weights of the families of the elements, 1858, 57.
—— on the atomic weights of the elements of six chemical families, 1858, 59.
*MERRIMAN (Dr. S. W. J.) on the comparative frequency of uterine conception, 1844, 85.
MERRITT (Mr.) on the state of education in Liverpool, 1837, 138.
*METHUEN (R.) on the management of mercantile vessels, 1856, 164.
MEYNELL (T.) on the fishes of Yorkshire, 1844, 62.
*MIALL (Dr.) on the melting-points of bodies, 1857, 53.
*MICHEL (H. E.) on the abandoned workings of the Australian gold-fields, 1854, 142.
MICHELL (T.) on the Russian trade with Central Asia, 1859, 186.
MICHELSON (Dr.) on the flowers and vegetation of the Crimea, 1855, 106.
*—— on the flora of the Crimea, 1856, 90.
*—— on the geography of breadstuffs, 1856, 90.
*—— on serfdom in Russia, 1860, 191.
*MICKIE (J.), cruise in the Gulf of Pe-che-li and Leo-tung, China, 1860, 170.
MIDDENDORFF (Prof. von) on certain races of Siberia, 1846, 115.
MIDDLEMORE (R.) on the treatment of capsular cataract, 1839, 96.
—— on an operation for an artificial pupil, 1839, 96.
MILES (Rev. Dr. C. P. M.) on the fauna of the Clyde, and on the vivaria exhibited in the City Hall, Glasgow, 1855, 114.
MILLAR (Capt.) on the state of crime in Glasgow, 1840, 169.
—— on the state of crime in London, Dublin, and Glasgow, 1840, 173.
*MILLER (General) on the Sandwich Islanders, 1844, 83.
MILLER (HUGH) on certain extraordinary peculiarities of structure in the more ancient ganoids, 1850, 91.
—— on peculiar scratched pebbles and fossil specimens from the boulder clay, and on chalk flints and oolitic fossils from the boulder clay in Caithness, 1850, 93.
—— on the less-known fossil floras of Scotland, 1855, 83.
MILLER (JOHN), fossil plants of the old red sandstone of Caithness, 1855, 85.
—— on some new fossils from the old red sandstone of Caithness, 1859, 115.
—— on the age of the reptilian sandstones of Morayshire, 1859, 115.
MILLER (J. F.) on the fall of rain in the Lake districts of Cumberland and Westmoreland, and other places, 1846, 18.
——, readings of mountain rain-gauges, 1846, 21.
MILLER (W.) on decimal coinage, 1854, 142.
*—— on the decimalization of the tariff, 1854, 143.
MILLER (Prof. W. A.) on the action of gases on the prismatic spectrum, 1845, 28.
——, analysis of wrought iron produced by cementation from cast iron, 1848, 55.
—— on the atomic weight of oxygen, 1860, 70.
MILLER (Prof. W. H.) on the construction of a new barometer, 1833, 414.
—— on the positions of the axes of optical elasticity in oblique prismatical crystals, 1834, 556.
—— on the unequal expansion of minerals in different directions by heat, 1837, 43.
—— on Wollaston's goniometer, 1838, 153.
MILLIGAN (J.) on the pressure of the atmosphere, and its power in modifying and determining hæmorrhagic disease, 1858, 138.
MILLINGEN (Dr.), the vaccine virus preserved in glycerine, 1857, 115.
*MILLS (G.) on manœuvring steamers, 1855, 208.
MILNE (Mr.), notice of a high-pressure filter for domestic purposes, 1840, 211.
MILNE (D.) on the geology of Berwickshire, 1834, 624.

REESE LIBRARY OF THE UNIVERSITY OF CALIFORNIA

MILNE (D.) on the Berwick and North Durham coal-fields, 1838, 76.
*—— notice respecting the metalliferous veins of Tyndrum, 1840, 97.
—— on earthquakes in Scotland, 1840, 97.
MILNE (J.) on a gas regulator, 1840, 213.
*MILNE (J. D., jun.) on the homologous development of the muscular system, 1859, 265.
MILNE-EDWARDS (M.) on the metamorphosis of certain trilobites discovered by M. Barrande, 1849, 59.
MILNER (W. R.) on the influence of various circumstances in causing gain or loss in the weight of prisoners in Wakefield convict-prison, 1858, 139.
MILNES (R. MONCKTON), concluding address to the Statistical Section, 1856, 161.
MILWARD (A.) on an extensive mud-slide in the island of Malta, 1848, 70.
—— on the origin of "dirt-bands" on glaciers, 1848, 71.
—— on an instrument called the "Upton draining tool," as illustrating a principle by which the resistance of soils to agricultural implements may be considerably diminished, 1849, 122.
—— on the condition of the city and neighbourhood of Malaga, 1850, 151.
MINCHIN (Dr.) on the macrocephali of Hippocrates, 1857, 146.
MITCHELL (Mr.) on timber bridges, 1840, 197.
MITCHELL (H.) on new fossils from the lower old red sandstone, 1859, 116.
MITCHELL (J. M.) on the economical history and statistics of the herring, 1860, 191.
*MITCHELL (Rev. W.) on descriptive labels for mineral collections in public institutions, 1856, 57.
*—— on the Koh-i-noor previous to its cutting, 1860, 87.
MOBERLEY (Rev. Dr.) on a large Plesiosaurus discovered in lias, 1848, 78.
*MOFFAT (Dr. T.) on the action of the carbo-azotic acid and the carbo-azotates on the human body, 1855, 121.
*MOFFATT (Dr.) on the existence of ozone in the atmosphere, 1848, 56.
MOGGERIDGE (M.) on two cases of uncommon atmospheric refraction, 1848, 33.
—— on a peculiarity in the Protococcus nivalis, 1848, 86.
—— on the time required for the formation of "rolled stones," 1856, 69.
MOHR (Dr.) on a new method of preparing morphia and its salts, 1840, 78.
MOIGNO (Abbé), notice of a new arithmometer, or calculating machine, by T. de Colmar, 1854, 1; notice of M. Babinet's homalographic maps, 2.
—— on the preservation of milk, 1854, 74.
—— on a method of determining whether the luminiferous vibrations are parallel or perpendicular to the plane of polarization, 1857, 9.
MOIGNO (Abbé), notices of photography, 1857, 53.
—— on three new electrotype processes, 1857, 54.
——, supplement to Newton's method of resolving equations, 1859, 9.
—— on M. Ruhmkorff's new electro-medical apparatus, 1859, 62.
—— on Becquerel's phosphoroscope, 1859, 62.
—— on a new photometer, 1859, 62.
—— on the phonautograph, an instrument for registering simple and compound sounds, 1859, 62.
*—— on matches without phosphorus or poison, 1859, 74.
——, notice of a nephelogene, 1859, 74.
*—— on Corne and Demeaux's disinfecting and deodorizing powder, 1859, 74.
—— on preserving milk perfectly pure in the natural state, without any chemical agent, 1859, 74.
—— on a new gas-burner, 1859, 237.
*—— on a helicometer, an instrument for measuring the thrust of the screw propeller, 1859, 237.
*—— on M. Giffard's automatic injector for feeding boilers, 1859, 237.
*—— on an application of the moving power arising from tides to manufacturing, agricultural and other purposes, 1859, 237.
MOLESWORTH (G. L.) on tangent-wheels, 1857, 186.
MOLYNEUX (W.) on the coal strata of North Staffordshire, with reference particularly to their organic remains, 1859, 103.
—— on fossil fish from the North Staffordshire coal-fields, 1860, 88.
MONCRIEFF'S (Rev. Dr.) treatise on arithmetic in the Chinese language, Rev. Dr. Bryce's account of, 1852, 1.
MONTGOMERY (Dr. W. F.) on a newly discovered peculiarity in the uterine decidua, 1836, 121.
MOORE (Mr.) on corroded leaden pipe, 1835, 55.
MOORE (A.) on registration of births, deaths, and marriages in Ireland, 1857, 164.
MOORE (C.) on the skin and food of Ichthyosauri and Teleosauri, 1856, 69.
—— on the middle and upper lias of the West of England, 1856, 70.
—— on triassic beds near Frome, and their organic remains, 1858, 93
—— on the supposed Wealden and other beds near Elgin, 1859, 264.
*—— on Brachiopoda, and on the development of the loop in Terebratula, 1859, 265.
—— on the contents of three square yards of triassic drift, 1860, 87.
MOORE (D.) on the plants which, by their growth and decomposition, form the principal part of the Irish turf-bogs, 1857, 97.

Moore (Dr. E.) on the discovery of organic remains, in a raised beach, in the limestone cliff under the Hoe at Plymouth, 1841, 62.
—— on the strata penetrated in sinking an Artesian well at the Victoria spa, Plymouth, 1841, 63.
*——, notice of fossils discovered in some of the slate rocks, 1841, 64.
*Moore (J.) on Syrrhaptis paradoxus, 1859, 257.
Moore (O. A.) on the flora of Yorkshire, 1844, 70.
Moore (Dr. W.), statistics of small-pox and vaccination in the United Kingdom, 1859, 223.
Moorsom (Admiral) on the want of facts respecting the performance of vessels at sea, 1857, 187.
—— on the performance of steam-vessels, the functions of the screw, and the relations of its diameter and pitch to the form of the vessel, 1858, 215.
—— on the performance of steam-vessels, 1859, 237.
*Morgan (W.) on some bones found in the bed of the Tawey, 1848, 71.
Moro (G.) on the communication between the Atlantic and Pacific oceans, through the Isthmus of Tehuantepec, 1844, 58.
Morren (Prof.) on the production of vanilla in Europe, 1838, 116.
Morris (Rev. F. O.) on zoological nomenclature, 1844, 78.
—— on a plan for preventing the stealing of letters by letter-carriers, 1844, 103.
—— on progressive, practical, and scientific education, 1853, 107.
—— on the specific distinctions of Uria troile and Uria lacrymans, 1857, 105.
Morris (Prof. J.) on the geology of the neighbourhood of Stamford and Peterborough, 1847, 127.
—— on the genus Siphonotreta, with a description of a new species, 1849, 57.
*Morrison (Lieut.) on an instrument for measuring the electricity of the atmosphere, 1837, 38.
—— on the magnet-electrometer, 1838, 74.
*—— on an analogy between the atomic weights of certain gases and the expansions of the colours of the solar spectrum, 1839, 29.
Morrison (Rev. J.) on some fossils found at Elgin, 1859, 115.
—— on fossil remains found at Urquhart near Elgin, 1859, 263.
Morriss-Stirling (T. D.) on proposed substitutes for the potato, 1846, 90.
Mortimer (J.) on a fish with four eyes, 1838, 110.
Mosander (Prof. C. G.) on the new metals lanthanium and didymium, which are associated with cerium; and on erbium and terbium, new metals associated with yttria, 1843, 25; addendum, 30.
*Moseley (Prof.) on the theory of locomotion, 1836, 130.
—— on the equilibrium of the arch, 1837, 133.
Moseley (Rev. H.) on a machine for calculating the numerical values of definite integrals, 1841, 35.
—— on the cause of the descent of glaciers, 1860, 48.
Mösee (M.) on a very curious fact connected with photography, 1842, 14.
Moses (F.) on the subsidences which have taken place in the mineral basin of South Wales, 1848, 71.
Mossotti (Prof.) on the calculation of an observed eclipse or occultation of a star, 1855, 26.
—— on the distribution of the orbits of the comets in space, 1857, 23.
Motley (T.) on the construction of a railway with cast-iron sleepers, 1838, 157.
—— on a suspension-bridge over the Avon, 1838, 157.
Mounsey (J. C.) on a singular iridescent phenomenon seen on Windermere Lake, 1855, 41.
Moy (T.), improvements in the mode of working steam-engines, 1857, 187.
—— on the philosophy of the wave-line system of ship-building, 1857, 188.
Moyes (Corporal W.), observations with the thermometer, at Aden in Arabia, 1843, 22.
*Mulder (Prof.) on proteine and its compounds, 1847, 57.
—— on the presence of carbonates in blood, 1850, 57.
*Muller (Dr. H.) on a new acetic ether occurring in a natural resin, 1860, 71; on the isomers of cumol, 71.
*Muller (Dr. S.), geognostic sketch of the western position of Timor, 1858, 153.
*Mulligan (Mr.), quantitative estimation of tannin in some tanning materials, 1859, 75.
Munby (G.) on the vegetable productions of Algiers, 1849, 71.
Munro (Major) on the transmutation of Ægilops into Triticum, 1852, 68.
Munroe (Dr. H.), statistics relative to the northern whale fisheries, 1853, 109.
Murchison (Sir R. I.), remarks on Mr. Hutton's paper on the Whin Sill of Cumberland and Northumberland, 1831–32, 77.
—— on the old red sandstone and the formations beneath it, 1834, 652.
—— on the Silurian system of rocks, 1835, 59.
—— on the hydrography of the Severn, 1836, 88.
——, notice of a large fish (Holoptychius nobilissimus) from the old red sandstone of Clashbennie, Fifeshire, 1836, 94.
——, classification of the old slate rocks of the north of Devonshire, 1836, 95.

MURCHISON (Sir R. I.), on the fishes of the Ludlow rocks, or upper beds of the Silurian system, 1837, 91.
—— on the Silurian system of strata, 1838, 80.
—— on the carboniferous and Devonian systems of Westphalia, 1839, 72.
—— on the fishes of the old red sandstone, 1840, 99.
—— on the stratified deposits which occupy the northern and central regions of Russia, 1840, 105.
——, notice of new geological maps of different parts of Germany, 1840, 124.
——, notice of a memoir on the geology of the Western States of North America, by Dr. D. Dale Owen, 1842, 44.
—— on the geological structure of Russia, 1842, 45.
—— on the distinction between the striated surface of rocks and parallel undulations dependent on original structure, 1842, 53.
——, the "Permian system" as applied to Germany, with collateral observations on similar deposits in other countries, 1843, 52.
—— on the fossil contents of the tertiary and alluvial basin of the Middle Rhine, 1843, 55.
——, notice of a relievo map of England and Wales, 1843, 64.
—— on the palæozoic rocks of Scandinavia and Russia, 1844, 53.
——, notice of new Swedish and Norwegian maps, 1844, 55.
*——, notice of Dr. Mantell's geological map of the Isle of Wight, 1846, 58; notice of a beetle found imbedded in some artificial concrete, 82.
—— on Count Keyserling's Geology of the N.E. extremity of Russia in Europe, 1847, 65.
—— on the metamorphosis of certain trilobites discovered by M. Barrande, 1849, 58.
—— on the distribution of gold ore in the crust and on the surface of the earth, 1849, 60.
—— on the discovery of palæozoic fossils in the crystalline chain of the Forez in France, and on lines of dislocation between the lower and upper carboniferous deposits of France and Germany, 1850, 96.
——, review of the labours of M. Barrande in his work "The Silurian System of Bohemia," 1850, 97.
—— on the scratched and polished rocks of Scotland, 1851, 66.
*——, notice of Sir J. Brooke's notes on the geography of the northern portion of Borneo, 1851, 89.
—— on the palæozoic rocks of Germany, 1854, 87.
MURCHISON (Sir R. I.) notice of the discovery of rippled surfaces and trails of animals in the old red sandstone, 1854, 91.
—— on the relations of the crystalline rocks of the North Highlands to the old red sandstone of that region, and on the discoveries of fossils in the former by Mr. C. Peach, 1855, 85.
——, new geological map of Europe, 1855, 88.
——, note on a geological survey of the region between Constantinople and Broussa in Asia Minor, in search of coal, 1855, 94.
—— on the bone-beds of the upper Ludlow rock, and base of the old red sandstone, 1856, 70.
——, account of Rev. Dr. Livingstone's return journey across Southern Africa, 1856, 113.
——, the quartz rocks, crystalline limestones, and micaceous schists of the North-western Highlands of Scotland proved to be of lower Silurian age, 1857, 82.
——, some results of researches among the older rocks of the Highlands of Scotland, 1858, 94.
——, address as President of the Geographical and Ethnological Section, 1858, 143.
——, extracts from Mr. W. Russell's letter relative to the death of M. Adolphe Schlagintweit, 1858, 152.
——, notice of the project of a canal across the Isthmus of Kraw, which divides the Gulf of Bengal from that of Siam, 1858, 153.
——, his address as President of Section E, 1860, 148.
*——, exhibited a new geological map of the vicinity of Oxford, 1860, 90.
MURPHY (J. J.) on a proposal for the establishment of a uniform reckoning of time in connexion with the telegraph, 1857, 26.
—— on an instance of converging rays seen at Green-island, on the Antrim shore of Belfast Lough, 1857, 35.
——, reasons for extending limited liability to joint-stock banks, 1857, 165.
*—— on a proposed floating lighthouse, 1858, 218.
—— on the distribution of heat over the sun's surface, 1859, 50.
*MURPHY (R.) on solution of the principal questions which are treated of in Fourier's Théorie de la Chaleur, 1831–32, 547.
MURRAY (Dr.), meteorological observations made at Mahabuleshwar, India, 1839, 15.
MURRAY (A.) on additions to our knowledge of the zoology of Western Africa, 1855, 114.

MURRAY (A.) on a new species of Galago (Galago murinus) from Old Calabar, 1859, 153.
—— on the disguises of nature, 1859, 175.
*MURRAY (B. A.), demonstration that the three angles of every triangle are equal to two right angles, 1857, 4.
—— on a machine for spinning silk from the cocoon, 1857, 188.
*MURRAY (J.), notice of a new life-boat, and of a work printed upon paper made from New Zealand flax, 1836, 132.
—— on the milk of the cow-tree, and on two sorts of paper manufactured from the Phormium tenax and the Musa textilis, 1837, 58.
*—— on the water of the Dead Sea, 1838, 73.
MURRAY (Sir J.) on the influence of artificial rarefaction in some diseases, and the effects of its condensation in others, 1835, 96.
—— on the disordered conditions of the human body caused by the urinary salts, 1837, 100.
—— on neuralgia and fluid magnesia, 1839, 106.
—— on the choice of perennial rather than annual fertilizers, 1857, 54.
—— on the laying of submarine telegraph cables, 1857, 189.
MURRAY (J. D.) on the vitality of potato seeds, 1847, 86.
MUSHET (D.) on the deoxidation of iron ore, 1836, 64.
—— on a metallic cement from iron ore, 1836, 65.
*—— on the waste experienced by hot and cold blast iron during the process of refining, 1837, 56.
—— on the quality of iron for railways, 1837, 134.
MUSHET (R.), description of an ancient miner's axe discovered in the Forest of Dean, 1856, 71.
MUSPRATT (Dr. J. S.) on the supposed formation of valerianic acid from indigo, and on the acid formed by the action of hydrate of potash upon lycopodium, 1844, 33.
MYERS (Rev. T.) on ethno-epo-graphy, 1844, 84.

*NACHOT (M.) on new forms of microscope, adapted for physiological demonstration, 1855, 12.
*NAPIER (J. R.) on a new method of drying timber, 1855, 208.
*—— on a simple boat plug, 1855, 208.
*—— on the launch of the steamer 'Persia,' 1855, 208.
*NAPIER (R.) on the apprenticeship system in reference to the freedom of labour, 1857, 166.
NAPIER and SONS' (Messrs. R.) experiments on the strength of wrought iron and steel, 1859, 242.
NAPIER (Mr.), process of etching glass in relief by hydrofluoric acid, 1859, 88.
*NASMYTH (A. J.) on the cellular structure of the ivory, enamel, and pulp of the teeth, as well as of the epithelium, &c., 1839, 109.
Report of the Council, with the correspondence and documents relating to the above, 1841, 1; 1842, 1.
NASMYTH (J.) on the bending of silvered plate glass into mirrors, 1839, 7.
—— on the application of the law of definite proportions to the stratification of clouds, 1842, 26.
—— on the strength of hammered and annealed bars of iron and railway axles, 1842, 105.
—— on a peculiar property of coke, 1848, 56.
—— on the chemical character of steel, 1848, 57.
—— on an oil test, 1849, 124.
—— on the structure of the lunar surface and its relation to that of the earth, 1850, 25.
—— on an improved safety-valve, 1851, 115.
—— on a steam-fan for the ventilation of coal-mines, 1851, 116.
*—— on an improved apparatus for casting the specula of reflecting telescopes, 1851, 116.
——, proposed theory of the origin of the asteroids, 1852, 21.
—— on drawings of the moon, 1853, 14.
—— on the structure of lunar volcanic craters, 1854, 91.
—— on a method of boring holes in rock for tunneling purposes, 1854, 157.
—— on a marine mortar for destroying ships, 1854, 158.
—— on a lightning conductor for chimneys, 1854, 158.
—— on the form of lightning, 1856, 14.
—— on the plastic origin of the cuneiform character, and its relation to our own alphabet, 1856, 118.
—— on some phenomena in connexion with molten substances, 1857, 26.
*NASSE (Prof.) on the composition of the blood and bones of domestic animals, 1842, 40.
NAYLOR (W.) on a new double-acting steam hammer, 1853, 218.
NEILD (W.) on the income and expenditure of the working classes in Manchester and Dukinfield, 1841, 90.
—— on the police statistics of Manchester, 1845, 89.
*—— criminal and miscellaneous statistical returns of the Manchester police, 1846, 98.
NEISON (F. G. P.), statistics of crime in England and Wales, 1846, 102.

NEISON (F. G. P.) on education and crime, 1847, 101.
—— on the mortality of the provident classes in this country and on the continent, 1850, 151.
——, analytical view of railway accidents in this country and on the continent of Europe, 1853, 109.
—— on phthisis in the army, 1858, 189.
NELSON (Dr. H.) on the fecundation of the ova in Ascaris mystax, 1855, 131.
*NEVILLE (J.) on the flow of water through circular pipes, 1857, 189.
NEVINS (Dr. J. B.) on the storms which have visited England and Ireland during 1852, 1853, and 1854, with reference to the theory of rotatory storms, 1854, 30.
NEWBIGGIN (Dr. P.) on the therapeutic effect of croton oil in certain nervous disorders, 1840, 156.
NEWMAN (Prof.) on the Ghadamsi dialect of Berber, 1847, 124.
—— on the Soukaneeah dialect of the Berber, 1850, 142.
NEWMAN (J.) on a new method of constructing a portable barometer, 1833, 417.
NEWMARCH (W.) on new supplies of gold, 1853, 110.
*——, magnitude and fluctuation of the circulation of bills of exchange, 1854, 143.
——, facts and statements connected with the question—whether, in consequence of the gold discoveries, its exchangeable value has fallen below its former level, 1854, 143.
—— on emigration from the United Kingdom, and from France and Germany, 1855, 183.
*——, remarks on two lectures delivered at Oxford on the subject of his paper "On the Loans raised by Mr. Pitt," 1855, 183.
—— on the Crédit mobilier and other recent credit institutions in France, 1856, 146; 1858, 194.
—— on the former and present plans of disposing of the waste lands in the Australian colonies, 1856, 146.
—— on the recent legislation relative to joint-stock companies and joint-stock banks, 1857, 166.
*—— on some of the economical questions connected with the effect of the new gold in diminishing the difficulties of the last few years, 1857, 166.
—— on the history of prices of 1857 and 1858, 1858, 194.
*—— on some schemes of taxation, and the difficulties of them, 1860, 194.
NEWPORT (G.) on the reciprocal relation of the vital and physical forces, 1850, 133.
NICHOL (Prof.) on the observatory erecting near Glasgow, 1840, 1.
—— on the state of the observatory at Glasgow, 1842, 12.
NICHOL (Prof.) on the chronology of the formations of the moon, 1855, 28.
*—— on climatological elements in the western district of Scotland, 1855, 42.
NICHOLSON (E. C.) on the estimation of iron by the method of Marguérite, and on the preparation of the standard solution of permanganate of potash, 1854, 74.
—— on the chemical composition of some iron ores called "brass" occurring in the coal-measures of South Wales, 1855, 66.
NICHOLSON (P.) on the oblique arch, 1838, 152.
NICHOLSON (W.) on Gordon's plan of ventilating coal-mines, 1849, 125.
NICOL (Prof. J.) on the geology of the southern extremity of Cantyre, Argyleshire, 1850, 100.
*—— on the occurrence of glacier moraines in Arran, 1852, 55.
*—— on the structure of the South Silurian mountains of Scotland, 1852, 55.
——, new geological map of Europe, 1855, 88.
—— on striated rocks and other evidences of ice-action observed in the north of Scotland, 1855, 88.
—— on the age and relations of the gneiss rocks in the north of Scotland, 1858, 96.
—— on the geological structure of the vicinity of Aberdeen and the north-east of Scotland, 1859, 116.
—— on the relations of the gneiss, red sandstone, and quartzite in the North-west Highlands, 1859, 119.
NICOL (W.) on the anatomical structure of recent and fossil woods, 1834, 660.
—— on the structure of Coniferæ, 1835, 73.
*NICOLAY (Rev. C. J.) on the systematic classification of watersheds and water-basins, 1851, 89.
*—— on certain places in the Pacific, in connexion with the great-circle sailing, 1853, 89.
—— on the eastern territory of the Ecuador and the river Napo, 1854, 123.
NIÈPCE DE ST. VICTOR (M.) on two new photochemical experiments, 1859, 260.
NILSSON (Prof.) on changes in the fauna of Sweden, 1847, 79.
NIVEN (N.) on the arrangement of plants for a botanic garden, 1835, 80.
—— on vegetable physiology, 1837, 102.
—— on the importance of understanding the root principle in the cultivation of trees, 1857, 98.
—— on the remarkable result of an experiment upon a fruit-bearing tree, 1857, 100.
*NIVERE (M.) on cottage gardening and labourers' holdings, 1857, 166.
NOBLE (Mr.) on the influence of the factory system in the development of pulmonary consumption, 1842, 96.
NORMANDY (Dr.) on the marine aërated freshwater apparatus, 1855, 68.

NORTHAMPTON (Marquis of), summary of observations with the thermometer at Aden, 1843, 22.
NORTON (Capt. J.) on railway signals, 1854, 158.
NORTON (J. P.) on the ashes of oats, 1845, 35.
—— on the composition of slate rocks, and the soils formed from them, 1845, 38.
NORWOOD (Rev. T. W.) on the comparative geology of Hotham, near South Cave, Yorkshire, 1858, 96.
—— on the race and language of the gipsies, 1858, 195.
NOTT (J.) on a new electrical machine, and upon the electricity of the atmosphere, 1843, 15.
*NOURSE (W. E. C.) on ascertaining the causes of death in birds and animals, 1856, 97.
—— on the medical indications of poisoning, 1856, 97.
—— on the colours of leaves and petals, 1858, 115; 1859, 138.
—— on the habits and instincts of the chameleon, 1859, 153.
—— on the organs of the senses, and on the mental perceptive faculties connected with them, 1859, 171.
NUGENT (Lord) on the sea rivulets in Cephalonia, 1836, 81.
NUNNELEY (T.) on the form of the eyeball, and the relative position of the entrance of the optic nerve into it in different animals, 1858, 139.
—— on the structure of the retina at the punctum centrale, or foramen of Sœmmering, 1858, 141.
—— on the structure of the choroid coat of the eye, and more particularly on the character and arrangement of the pigmentary matter, 1858, 141.
NUTTALL (J.) on the management of the pine tribe, 1836, 104.

O'BEIRNE (Dr. J.) on the functions and diseases of the intestinal canal, 1835, 105.
—— on tetanus, 1836, 109.
O'BRIEN (Rev. M.) on the propagation of waves in a resisted medium, and on the dispersion and absorption of light, 1844, 8.
O'CONNOR (Dr.) on the sudden falling off of the hair of the head, eyebrows, and eyelashes from fright, 1843, 84.
O'DONOVAN (Dr. J.) on the surnames of the Irish people, 1857, 130.
*O'FLANAGAN (Mr.), description of the Blackwater river, 1843, 93.
O'MEARA (Rev. E.) on the forms of Diatomaceæ found in chalk, 1857, 97.
O'NEILL (J.) on a plan for giving alarms in passenger trains, 1858, 219.
ODLING (Dr. W.) on the alkaline emanations from sewers and cesspools, 1856, 57.
ODLING (Dr. W.) on the detection of antimony for medico-legal purposes, 1856, 57.
—— on the condition of Thames water as affected by London sewage, 1857, 44.
—— on the presence of copper in the tissues of plants and animals, 1857, 55.
—— on the effects of alum in panification, 1857, 55.
—— on the atom of tin, 1858, 58.
—— on Marsh's test for arsenic, 1859, 75.
—— on the composition of Thames water, 1859, 75.
—— on a new mode of bread-making, 1859, 76.
ŒRSTED (Prof.) on the compressibility of water, 1833, 353.
—— on the deviation of falling bodies from the perpendicular, 1846, 2.
—— on the changes which mercury sometimes suffers in glass vessels hermetically sealed, 1846, 37.
OGILBY (W.) on the scientific principles on which classification in the higher departments of zoology should be based, 1845, 62.
—— on the geographical distribution of animals in connexion with the progress of human civilization, 1852, 78.
—— on the dispersion of domestic animals in connexion with the primary ethnological divisions of the human race, 1857, 105.
OGILVIE (Dr. G.) on the vegetative axis of ferns, 1859, 139.
—— on the genetic cycle in organic nature, 1859, 172.
—— on the structure of fern stems, 1860, 112.
OLDHAM (J.) on the Gresham buoy, for recording the loss of missing ships at sea, 1858, 219.
OLDHAM (THOMAS) on the occurrence of marine shells in the gravels of Ireland, 1844, 57.
—— on the geology of the county of Wicklow, 1848, 71.
——, general sketch of the districts visited by the Geological Survey of India, 1857, 85.
OLIPHANT (L.), notes on Japan, 1859, 194.
OLIPHANT (W.) on the skull of a Manatus senegalensis (sea cow) from Old Calabar, and some account of the Egbo Society, 1855, 117.
OLIVER (J. Y.) on the Baron de Bode's insulated compass, 1845, 16.
OLLIER (M.) on the artificial production of bone and osseous grafts, 1860, 143.
OLLIFFE (Dr.) on a peculiar disease of the biliary ducts, 1843, 79.
—— on intestinal obstruction, 1843, 82.
OPPENHEIM (Dr. A.) on the comparative value of certain salts for rendering fibrous substances non-inflammable, 1859, 86.

Oppert (Dr. J.), geographical and historical results of the French scientific expedition to Babylon, 1855, 148.
Oram (Mr.) on cementing small coal and coal-dust for fuel, 1838, 85.
—— on the economy of fuel, 1839, 69.
Orlebar (A. B.) on the magnetic and meteorologic observatory at Bombay, 1847, 28.
Ormerod (G. W.) on the extent of the Northwich salt-field, 1846, 62.
—— on the drainage of a portion of Chat Moss, 1848, 72.
—— on the gradual subsidence of a portion of the surface of Chat Moss in Lancashire, by drainage, 1850, 101.
*Osborn (Mr.), notice of the new volcanic island, 1831–32, 85.
Osborn (H.) on the presence of atmospheric air, uncombined chlorine, and carbonic acid in the water of wells in the suburbs of Southampton, and their action on lead, 1846, 42.
*Osborn (Capt. S.) on the Arctic expeditions, 1855, 149.
*—— on the Sea of Azof, and the Sivash or Putrid Sea, 1857, 148.
—— on the Yang-tse-kiang, and its future commerce, 1859, 196.
*—— on the formation of oceanic ice in the Arctic regions, 1860, 170.
Osborne (Dr.) on the effects of cold on the human body, and on a mode of measuring refrigeration, 1835, 94.
*—— on the statistics of lunacy, with special relation to the asylum in Cork, 1843, 96.
Osler (A. F.) on a new registering anemometer and rain-gauge, 1837, 33.
——, account of some indications of the anemometers at Plymouth and Birmingham, 1839, 17.
—— on the application of the principle of the vernier to the subdividing of time, 1842, 9.
—— on the results of certain anemometers, 1849, 25.
——, registers from his new integrating anemometer, 1850, 46.
—— on his anemometer and rain-gauge at the Liverpool observatory, 1854, 34.
—— on a portable self-registering anemometer for recording the direction and amount of horizontal motion of the air, 1858, 38.
Oswald (F.) on the occurrence of Silurian rocks at Ober and Neu Schmollen, near Breslau, in Silesia, 1845, 47.
*Outram (Sir B. F.) on Hartlepool pier and port as a harbour of refuge, 1855, 149.
Overweg's (Dr.) discovery of Devonian rocks in North Africa, Prof. E. Forbes on, 1851, 58.
Owen (Dr. D. D.), notice of his memoir on the geology of the Western States of North America, by Sir R. I. Murchison, 1842, 44.
Owen (J.) on the neglect of naval architecture in Great Britain, 1831–32, 608.
—— on naval architecture, 1833, 430.
Owen (Prof.) on the production of cataract by a worm, 1837, 98.
—— on Marsupiata, 1838, 105.
—— on the structure of the teeth, and the resemblance of ivory to bone, 1838, 135.
——, letter respecting Mr. Nasmyth's paper on the structure of the teeth, 1841, 4.
—— on a Thylacinus, the great dog-headed opossum, 1841, 70.
*—— on Dr. Martin Barry's researches on fibre, 1842, 83.
—— on Argonauta Argo, 1844, 74.
—— on a human skull from South Australia, used for holding and carrying water, 1844, 77.
—— on some fossil mammalia of South America, 1846, 65.
—— on the os humero-capsulare of the Ornithorhynchus, 1848, 79.
—— on the communications between the tympanum and palate in the crocodiles, 1848, 79.
—— on the homologies and notation of the dental system in mammalia, 1848, 91.
—— on the value of the origins of nerves as a homological character, 1848, 93.
—— on Lucernaria inauriculata, 1849, 78.
—— on new fossil mammalia from the eocene freshwater formation at Hordwell, Hants, 1851, 67.
*—— on the fossil mammalia of the red crag, 1851, 67.
*—— on the homologies of the cranial vertebræ, 1852, 78.
—— on the anthropoid apes, 1854, 111.
*—— on the anatomy of the great ant-eater, 1854, 113.
——, description of the remains of Ichthyosaurus found at Exmouth Island by the Arctic Searching Expedition, 1855, 79.
—— on the Ajuh of Dr. Vogel, from the river Benué, Central Africa, 1856, 99.
—— on a new genus (Dimorphodon) of Pterodactyle, with remarks on the geological distribution of flying reptiles, 1858, 97.
—— on remains of new and gigantic species of Pterodactyle (Pter. Fittoni and Pter. Sedgwickii) from the upper greensand near Cambridge, 1858, 98.
——, letter to Mr. E. Chadwick on the physiological limits to mental labour, 1860, 189.

Page (D.) on the subdivisions of the palæozoic rocks of Scotland, 1854, 91.
*—— on the structure and texture of stratified rocks, 1854, 92.
—— on the Pterygotus and Pterygotus beds of Great Britain, 1855, 89.

PAGE (D.) on the freshwater limestone of Dr. Hibbert, 1855, 91.
—— on the subdivisions of the palæozoic and metamorphic rocks of Scotland, 1855, 92.
—— on the skeleton of a seal from the pleistocene clays of Stratheden in Fifeshire, 1858, 103.
—— on the palæontology of the tilestones or Silurio-Devonian strata of Scotland, 1858, 104.
—— on the relations of the metamorphic and older palæozoic rocks in Scotland, 1858, 105.
*—— on some new Boreal forms from the pleistocene brick-clays of Stratheden, 1859, 120.
*—— on the structure, affinities and geological range of the crustacean family Eurypteridæ, 1859, 120.
PALLISER (Capt. J.) on the physical geography of the country examined by the expedition exploring the south-western regions of British North America, 1858, 153.
—— on the course and results of the British North American Exploring Expedition, 1860, 170.
PARE (W.) on "equitable villages" in America, 1855, 183.
PARIS (Admiral) on the manœuvring of screw vessels, 1859, 240.
PARKES (HARRY) on the Hindú-Chinese nations and Siamese rivers, with an account of Sir John Bowring's mission to Siam, 1855, 149.
PARKIN (T.) on a new construction of wooden railway wheels, 1839, 131.
—— on railway foundations, 1839, 132.
PARKINSON (Rev. R.) on the registers of the collegiate church of Manchester, 1842, 92.
PARKINSON (W.) on a water-meter, 1849, 125.
PARNELL (E. A.) on restrained chemical action, 1841, 51.
—— on some subjects connected with the sulphocyanides, 1841, 51.
PARNELL (R.) on some new and rare British fishes, 1838, 109.
*PARSEY (Mr.) on natural perspective, 1839, 29.
PASLEY (Gen. Sir C. W.) on simplifying and improving our national measures, weights, and money, 1847, 43.
*—— on simplifying and improving the measures, weights, and moneys of this country, 1855, 184.
——, plan for simplifying and improving the measures, weights, and money of this country without altering the present standards, 1856, 146.
PATERSON (Rev. Dr.) on an improved lifeboat, 1840, 211.
*—— on the cultivation of sea-sand or sand-hills, 1855, 118.
*PATON (J.) on the sanitary condition of Darwen, Lancashire, 1849, 96.
PATTERSON (R.), notice of living specimens of a species of Ciliograde (Bolina hibernica), 1839, 84.
—— on Medusæ, 1840, 142.
—— on natural history as a branch of education, 1841, 77.
*——, notice of Ascidians, discovered in the chain of the bridge at Itchin, near Southampton, 1846, 83.
——, exhibition of living sea-animals, 1854, 111.
—— on Priapulus caudatus, 1854, 113.
—— on a plan of aërating aquavivaria adopted by Dr. Ball, 1854, 115.
*——, zoological diagrams prepared by him for the Government department of Science and Art, 1855, 118.
—— on the quantity of periwinkles shipped at Belfast, 1857, 106.
PATTINSON (H. L.) on a new process for the extraction of silver from lead, 1838, 50.
PAXTON (Sir J.) on the great fountain at Chatsworth, 1844, 102.
PAXTON (Dr. J.) on improvements in pathological drawing, 1849, 79.
PEACE (W.) on the dislocations of the coal strata in Wigan, 1837, 82.
PEACH (C. W.) on the fossil organic remains of the south-east coast of Cornwall, and of Bodmin and Menheniott, 1841, 61.
—— on the nidus and growth of the Purpura lapillus, and on the Patella pellucida and P. lævis, 1842, 66.
—— on the fossils of Polperro in Cornwall, 1843, 56.
—— on marine zoology, 1844, 64.
*—— on the natural history of Goran in Cornwall, 1844, 65.
—— on the marine fauna of Cornwall, 1845, 65.
—— on the marine zoology of Cornwall, 1846, 86.
——, notice of additions to the Cornish fauna, 1847, 78.
—— on the fossil geology of Cornwall, 1849, 63.
—— on the luminosity of the sea on the Cornish coasts, 1849, 80.
—— on zoophytes found in the vicinity of Peterhead, with a notice of some new to the British list, 1850, 126.
—— on calcareous zoophytes found at Ipswich, Harwich, &c., 1851, 81.
—— on some fishes, crustacea, and mollusca found at Peterhead, 1852, 78.
—— on the habits of fish in relation to certain forms of Medusæ, 1853, 70.
—— on specimens of old red sandstone containing bitumen and silicified wood (?), and Wick flagstone containing layers of broken and compressed shells (?), 1854, 92.
——, discovery of fossils in the crystalline rocks of the North Highlands, 1855, 87.

PEACH (C. W.), notice of the natural printing of sea-weeds on the rocks in the vicinity of Stromness, 1856, 90.
——, discovery of fossils in the limestone of Durness, 1857, 82.
—— on some peculiar forms of spines found on two species of the spinigrade starfishes, 1858, 128.
—— on fossil fish, new to the old red sandstone of Caithness, 1859, 120.
—— notes on different subjects in natural history, 1859, 155.
—— on the zoophytes of Caithness, 1859, 155.
——, a new form of ichthyolite discovered by, 1860, 78.
*—— on the statistics of the herring fishery, 1860, 120.
PEACOCK (A.) on decimal fractions, 1842, 10.
PEACOCK (Rev. Dr. G.) on the report of the Commissioners for the restoration of lost standards of weights and measures, and on their proposal for the introduction of a decimal system, 1842, 8.
—— on the tenure of land in the island of Madeira, 1849, 26.
*PEARSALL (T. J.) on the action of water upon lead, 1837, 58.
—— on masses of salt discovered in the lowest portions of guano on the island of Ichaboe, 1845, 39.
—— on changes observed in wood from the submerged forest at Wawne, in Holderness, 1853, 45.
—— on crystals from the sea-coast of Africa, 1853, 45.
—— on lime flowers, or peculiarly-formed substances from the brickwork of one of the reservoirs of the Hull waterworks, 1853, 45.
*PEARSON (W. B.) on the compounds of chromium and bismuth, 1856, 58.
PECKITT (H.) on earthworms and larvæ of an undescribed species found in draining a field, 1858, 129.
PEEBLES (Mr.) on the expressibility of the roots of algebraic equations, 1840, 54.
PENGELLY (W.) on the Beekites found in the red conglomerates of Torbay, 1856, 74.
*—— on an ossiferous cavern at Brixham, near Torquay, 1858, 106.
*—— on an ichthyolite found in the Devonion slates of E. Cornwall, 1858, 223.
*—— on the trilobite found at the Knoll Hill, Newton Abbott, 1858, 224.
—— on the ossiferous fissures at Oreston near Plymouth, 1859, 121.
—— on the chronological and geographical distribution of the Devonian fossils of Devon and Cornwall, 1860, 91.
PENNY (Prof. F.) on the action of nitric acid on the chlorates, iodates, and bromates of potassa and soda, 1840, 79.
—— on a new salt obtained from iodine and caustic soda, 1840, 80.
PENNY (Prof. F.) on a new and ready process for the quantitative determination of iron, 1850, 58.
—— on the estimation of iodine, 1852, 37.
—— on a simple volumetric process for the valuation of cochineal, 1855, 68.
—— on the manufacture of iodine and other products from kelp, 1855, 69.
—— on the composition and phosphorescence of plate-sulphate of potash, 1855, 69.
PENNY (Rev. W. G.) on certain planetary perturbations, 1857, 27.
PENTLAND (J. B.) on the ancient inhabitants of the Andes, 1834, 623.
—— on the position of the city of Cuzco in Peru, 1838, 99.
PERCY (Dr. J.), contributions to the chemistry of diabetes, 1845, 39.
—— on a gas furnace for organic analysis, 1846, 49.
*—— on a specimen of artificial Humboldtite or melilite in large crystals, 1847, 57.
*—— on a new potash apparatus for organic analysis, 1847, 57.
—— on some of the alloys of tungsten, 1848, 57.
—— on copper containing phosphorus, and experiments on the corrosive action of sea-water on some varieties of copper, 1849, 39.
PERETTI (Prof.) on the bitter principles of some vegetables, 1844, 84.
PERIGAL (H., jun.) on the probable mode of constructing the Pyramids, 1844, 103.
PERKIN (W. H.) on the purple dye obtained from coal-tar, 1858, 58.
*PERREAUX (M.) on a dynamometric machine for measuring the strength of textile fabrics and other substances, 1852, 128.
PERRY (Dr.) on typhus fever, 1835, 101.
—— on local inflammation, the effusion of coagulable lymph, and the formation of pus, 1840, 159.
—— on contagious fevers, 1840, 160.
PERRY (Mr.), notice of the atmospheric railway, Kingstown and Dublin line, 1843, 101.
PETERMANN (A.), hydrography of the British Isles, 1848, 73.
—— on the distribution of the population of Great Britain and Ireland, 1848, 113.
—— on the temperature of the British Isles, and its influence on the distribution of plants, 1849, 26.
—— on the distribution of animal life in the Arctic regions, 1852, 112.
—— on the interior of Australia, 1853, 89.
*PETHERICK (Consul), exploration of the White Nile, 1859, 265.
*,—— on his proposed journey from Khartum in Upper Egypt to meet Capt. Speke on or near Lake Nyanza of Central Africa, 1860, 174.
PETRIE (W.) on the results of an extensive series of magnetic investigations, inclu-

ding most of the known varieties of steel, 1846, 33.
PETRIE (W.) on the phosphorescence of potassium, 1850, 59.
——, on the application of electricity and heat as moving powers, 1850, 183.
—— on the powers of minute vision—results of experiments for determining the best sort of station marks—and the errors liable in observing with optical instruments that measure on the principle of bringing two reflexions together, 1850, 183.
—— on the relative and absolute powers of galvanic arrangements, 1850, 185.
—— on the dynamic equivalent of current electricity, and on a fixed scale for electromotive force in galvanometry, 1850, 185.
—— on the motion of fluids; a remarkable variation in the great elementary law of the ratio between pressure and velocity, 1854, 63.
*PHELPS (Mr.) on the formation of peat, 1836, 107.
PHILLIPPS (Sir T.), method of destroying insects which attack books, &c., 1837, 99.
*—— on minutely-filamentous roots of the beech, &c., and also of some remarks on natural history in a MS. History of Wexford, 1840, 149.
*—— on an instance of instinct in a caterpillar, 1856, 97.
PHILLIPS (H.) on the bituminous coal-field of Pennsylvania, 1837, 96.
PHILLIPS (Prof. J.), account of the most remarkable phenomena in the geology of Yorkshire, 1831–32, 56.
——, remarks on Mr. Hutton's paper on the Whin Sill of Cumberland and Northumberland, 1831–32, 77.
—— on a new self-registering maximum thermometer, 1831–32, 580.
——, experiments on the quantities of rain falling at different elevations above the surface of the ground at York, 1833, 401; 1834, 560.
—— on the relations of mineral veins and the non-metalliferous joints in rocks, 1834, 654.
—— on a newly-discovered tertiary deposit in Yorkshire, 1835, 62.
—— on the direction of isoclinal magnetic lines in Yorkshire, 1836, 31.
—— on certain limestones and associated strata near Manchester, 1836, 86.
—— on the removal of boulders from the Cumbrian mountains, 1836, 87.
——, statement of the proceedings of the Meteorological Committee, 1837, 37.
——, experimental researches on rain, 1840, 45.
—— on the temperature of the air in York Minster, 1841, 29.
——, researches on rain at York, 1841, 30.
—— on the occurrence of some minute fossil crustaceans in palæozoic rocks, 1841, 64.
PHILLIPS (Prof. J.) on the microscopic structure of coal, 1842, 47.
—— on certain movements in the parts of stratified rocks, 1843, 60.
—— on the Ordnance geological museum, 1843, 61.
—— on simultaneous barometrical registration in the north of England, 1844, 21.
—— on the curves of annual temperature at York, 1844, 21.
—— on the quantities of rain received in gauges at unequal elevations, 1844, 21.
—— on the colour-stripes of a rose (Rosa sempervirens), single, 1848, 86.
——, ethnographical note on the vicinity of Charnwood Forest, 1848, 99.
—— on the therm-anemometer, 1849, 28.
—— on tumuli in Yorkshire, 1849, 86.
——, report of a Committee on the effects produced by lightning on a tree near Edinburgh, 1850, 13.
—— on isoclinal magnetic lines in Yorkshire, 1850, 14.
—— on the structure of the crag, 1851, 67.
—— on magnetic phenomena in Yorkshire, 1853, 6.
—— on photographs of the moon, 1853, 14.
—— on the most remarkable cases of unconformity among the strata of Yorkshire, 1853, 54.
—— on the dispersion of erratic rocks at higher levels than their parent rock in Yorkshire, 1853, 54.
—— on a new Plesiosaurus in the York museum, 1853, 54.
—— on a living specimen of Priapulus caudatus, dredged off the coast of Scarborough, 1853, 70.
—— on micrometrical and photographic drawings of the lunar surface, 1854, 25.
—— on certain trap-dykes in Arran, 1855, 94.
—— on a new method of making maximum self-registering thermometers, 1856, 41.
*—— on the ironstones in the oolitic district of Yorkshire, 1857, 89.
*—— on the money grants of the British Association, 1857, 167.
—— on some phenomena at the junction of the granite and schistose rocks in West Cumberland, 1858, 106.
—— on the hæmatite ores of North Lancashire and West Cumberland, 1858, 106.
*—— on the geology of the vicinity of Oxford, 1860, 90.
*PHILLIPS (Major) on some curious discoveries concerning the settlement of the seed of Abraham in Syria and Arabia, 1859, 197.
PHILLIPS (R.) on a blue pigment, 1838, 60.
*—— on the synthetical composition of white prussiate of potash, 1839, 56.
—— on some properties of alumina, 1848, 58.

PHIPPS (Dr. J.) on the sailing powers of two yachts, built on the wave principle, 1846, 112.
*PHIPPS (J. P.) on the application of the wave system of Mr. Scott Russell to the construction of sailing vessels, 1847, 132.
PHIPSON (Dr. T. L.) on some new cases of phosphorescence by heat, 1859, 76.
—— on the composition of the shell of Cardium edule, 1859, 77.
—— on the composition of a recently-formed rock on the coast of Flanders, 1859, 77.
PICKELLS (Dr.), eulogium on the late Richard Kirwan, LL.D., 1843, 39.
—— on the deleterious effects of Œnanthe crocata, 1843, 81.
*PIERCE (Prof. B.) on the physical constitution of comets, 1860, 37.
*—— on the dynamic condition of Saturn's rings, 1860, 37.
*—— on the motion of a pendulum in a vertical plane when the point of suspension moves uniformly on a circumference in the same plane, 1860, 37.
PLANT (J.) on the discovery of beds of Keuper sandstone containing zoophytes in the vicinity of Leicester, 1849, 64.
PLAYER (Mr.) on the application of anthracite coal at the Gwendraeth Iron-works, 1839, 130.
PLAYFAIR (Dr. LYON), statement of Prof. Liebig's views on poisons, 1840, 72.
—— on a new fat-acid, 1840, 76.
——, Prof. Liebig's letter to, on some interesting results obtained in his laboratory, 1841, 53.
—— on some new oxides of certain of the metals of the magnesian family, 1842, 35.
—— on the composition and characters of caryophyllin, 1842, 36.
*—— on atomic volumes, 1845, 31.
—— on the expansion of salts, 1846, 49.
*—— on decompositions produced by catalytic bodies, and on the molecular constitution of salts, 1847, 57.
—— on the condensation of volume in highly hydrated minerals, 1850, 60.
——, address as President of the Chemical Section, 1859, 65.
—— on a symmetrical arrangement of oxides and salts on a common type, 1859, 259.
*—— on the representation of neutral salts, &c., 1860, 71.
PLÜCKER (Prof.) on experiments belonging to a new magnetic action, 1848, 2.
—— on magnetism, 1853, 7.
POEY (Señor A.), hurricanes in the West Indies and the North Atlantic, 1855, 150.
POGSON (N.), discovery of the asteroid No. 46, 1857, 31.
—— on the ocular crystal micrometer, with observations of twelve double stars, 1858, 19.
POGSON (N.) on a new variable star (R Sagittarii), discovered with the five-foot Smythian telescope of the Hartwell House Observatory, 1858, 29.
—— on an improvement in the heliometer, 1859, 36.
—— on three variable stars, R and S Ursæ Majoris, and U Geminorum, as observed consecutively for six years, 1859, 36.
PONTON (M.) on certain laws of chromatic dispersion, 1859, 15.
—— on the law of the wave-lengths corresponding to certain points in the solar spectrum, 1859, 20.
—— on the laws of chromatic dispersion, 1860, 16.
POOLE (H.) on the meteorology of the Albion Mines, Nova Scotia, 1854, 35.
—— on a geological survey of the region between Constantinople and Brousa, in Asia Minor, in search of coal, 1855, 94.
——, observations with the aneroid métallique and thermometer, during a tour through Palestine and along the shores of the Dead Sea, 1856, 41.
POOLEY (C.) on engraving collodion photographs by means of fluoric acid gas, 1856, 58.
POPHAM (J.) on the treatment of gangrene of the lungs by chloride of lime, 1843, 82.
——, statistical returns of the North Cork Infirmary during a period of five years, 1843, 84.
PORRO (M.), portable apparatus for analysing light, 1859, 62.
PORTER (G. R.) on the price of wheat, and its influence on population in England, 1836, 133.
—— on the trade between the United Kingdom and the United States, 1837, 136.
—— on the progress of mining industry in France, 1838, 174.
—— on the systematic collection of the statistics of agriculture, 1839, 116.
—— on the mining industry of France, 1844, 86.
—— on the progress of savings' banks in the United Kingdom, 1845, 87.
—— on the iron trade, 1845, 91.
—— on the influence of education, shown by facts recorded for 1845 and 1846, in the Criminal Tables, 1847, 109.
—— on a comparative statement of prices and wages (during the years from 1842–49), 1849, 101.
—— on the agricultural statistics of Ireland, 1849, 104.
—— on the productive industry of Paris, 1852, 119.
PORTER (H. J.) on pawnbroking in Ireland, 1840, 181.

Porter (H. J.) on the monts de piété of Rome, Paris, and other cities on the continent, 1841, 91.
—— on the loan funds in Ireland, 1841, 93; 1842, 98.
—— on the monts de piété in Ireland, 1842, 98.
—— on the census of Sydney, New South Wales, 1857, 167.
*——, census of the province of Canterbury, New Zealand, 1857, 167.
—— on the best plan of cottage for agricultural labourers, 1860, 194.
Portlock (General) on the new red sandstone of England and Ireland, 1837, 88.
—— on the Silurian rocks in the co. of Tyrone, 1838, 84.
—— on the geology of Corfu, 1843, 57.
——, reply to remarks made by Prof. E. Forbes on the results of his dredging at Corfu, 1845, 65.
*—— on the natural history of Corfu, 1846, 84.
—— on apparent changes in the level of the coast near Portsmouth, 1848, 72.
—— on sounds emitted by mollusca, 1848, 80.
—— on the manner in which trap or igneous rocks intrude into the sandstone and conglomerate near North Berwick, 1850, 101.
——, notice of fossils collected by Mr. R. Rubidge at Sunday River, Cape frontier, 1851, 68.
——, notice of Capt. Ward's researches into the application of the voltaic battery to the ignition of gunpowder, 1854, 18.
Potter (Prof. R.) on a new construction of Sir Isaac Newton's reflecting microscope, 1831–32, 71.
—— on a theory of M. Fresnel concerning the reflexion of light from the surfaces of bodies, 1831–32, 74.
—— on electrical phenomena *in vacuo*, 1831–32, 84.
—— on the modification of the interference of two pencils of homogeneous light, 1831–32, 555.
—— on an instrument for photometry by comparison, and on some applications of it to optical phenomena, 1831–32, 556.
—— on the power of glass of antimony to reflect light, 1833, 377.
—— on a phenomenon in the interference of light, 1833, 378.
—— on an arch of the aurora borealis, 1833, 401.
Powell (Rev. Prof. B.) on the dispersive powers of the media of the eye, in connexion with its achromatism, 1833, 374; corrigendum, 466.
—— on the achromatism of the eye, 1834, 548.
—— on the theory of the dispersion of light by the hypothesis of undulations, 1834, 549.
Powell (Rev. Prof. B.) on the repulsion excited between surfaces at minute distances by the action of heat, 1834, 549.
——, lecture on the phenomena of prismatic dispersion in relation to the undulatory theory of light, 1835, 5.
—— on certain points connected with discoveries relative to radiant heat, 1835, 9.
*—— on the impermeability of water to radiant heat, 1836, 36.
—— on Von Wrede's explanation of the absorption of light, 1837, 16.
—— on the dispersion of light, 1837, 18.
—— on experiments relative to the influence of surfaces on radiation, 1837, 20.
——, proceedings of the Meteorological Committee, 1837, 37.
—— on the theory of light, 1838, 6.
—— on a new case of interference of light, 1839, 1.
—— on some optical phenomena observed by Sir David Brewster, 1839, 1.
—— on the wave-theory as connected with elliptic polarization, 1839, 2.
—— on the academical statistics of the University of Oxford, 1839, 119; 1842, 100; 1843, 95; 1848, 105.
—— on an experiment of interference, 1840, 14.
—— on a point in the wave-theory as applied to heat, 1840, 14.
—— on the theoretical computation of refractive indices, 1841, 24.
—— on the refraction of heat, 1841, 25.
—— on certain points of the wave-theory of light, 1841, 25.
—— on certain cases of elliptically polarized light, 1842, 13.
—— on apparatus for applying circular polarization to chemical inquiries, 1842, 32.
—— on elliptic polarization in light reflected from various substances, 1843, 9, 10.
—— on certain points connected with elliptic polarization of light, 1844, 7.
—— on points in the elliptic polarization of light by metallic reflexion, 1845, 6.
—— on certain cases of elliptic polarization of light by reflexion, 1846, 3.
—— on the bands formed by partial interception of the prismatic spectrum, 1846, 4.
—— on the apparent projection of a star on the moon, 1846, 5.
—— on shooting stars, 1847, 14.
—— on periodic meteors (table of meteor showers from 1841 to 1846), 1847, 15.
—— on the eclipse of October 1847, 1847, 16.
—— on anomalies in the dispersion of light, 1847, 37.
—— on an explanation of the "beads" and "threads" in annular eclipses, 1848, 2.
—— on a new case of interference of light, 1848, 3.

Powell (Rev. Prof. B.), observations of the annular eclipse of Oct. 9, 1847, 1848, 3.
—— on a new equatorial mounting for telescopes, 1849, 2.
—— on De Vico's comet, 1849, 2.
—— on discussions relative to the theory of the dispersion of light, 1849, 8.
—— on irradiation, 1849, 9.
—— on the refractive indices of several substances, 1850, 14.
——, remarks on Lord Brougham's experiments on light, &c., 1851, 11.
—— on M. Guyot's experiment on the earth's rotation, 1851, 23.
—— on luminous beams, 1852, 11.
—— on a peculiarity of vision, 1852, 11.
—— on converging sunbeams, 1852, 12.
—— on Fresnel's formulæ for reflected and refracted light, 1856, 15.
Power (Madame J.), experiments and observations on the Argonauta Argo, 1844, 74.
Power (Dr.) on plants found in the neighbourhood of Cork, 1843, 79.
Power (Dr. J. A.) on myrmecophilous Coleoptera, 1858, 129.
Power (Rev. J.), inquiry into the cause of endosmose and exosmose, 1833, 391.
Powrie (J.) on a fossiliferous deposit near Farnell, Forfarshire, 1860, 89.
Poznanski (Dr.) on the connexion between atmospheric vicissitudes and epidemic diseases, 1857, 115.
Pratt (S. P.) on specimens supposed to be from the slaty rocks of Mount Batten, 1841, 64.
—— on the coal deposits of the Asturias, 1845, 49.
Prestwich (J.) on the occurrence of Cypris in a part of the tertiary freshwater strata of the Isle of Wight, 1846, 56.
—— on some new facts in relation to the section of the cliff at Mundesley, Norfolk, 1860, 90.
Prévost (M. Constant), explication d'un tableau de l'étude méthodique de la Terre et du Sol, 1851, 68.
Price (Dr. A. P.) on a new photometer, 1853, 9.
—— on pentasulphate of calcium as a means of preventing and destroying the Oïdium Tuckeri, or grape disease, 1853, 46.
—— on determining the commercial value of oxide of manganese, 1853, 47.
—— on determining the amount of available chlorine contained in hypochlorites of lime, soda, or potash, 1853, 48.
*—— on a pentasulphide of calcium as a remedy for grape disease, 1853, 63.
—— on a new method of alkalimetry, 1854, 74.
Price (Rev. Prof. B.) on a new proof of the principle of virtual velocities, 1847, 5.
Price (Rev. Prof. B.), address as President of Section A, at Oxford, 1860, 1.
Price (Dr. D. S.) on the estimation of iron by the method of Marguérite, and on the preparation of the standard solution of permanganate of potash, 1854, 74.
*—— on the supposed influence of the hot-blast in augmenting the quantity of phosphorus in cast iron, 1854, 74.
—— on the chemical composition of some iron ores called "brass" occurring in the coal-measures of South Wales, 1855, 66.
Price (J.) on an improved method of constructing railways, 1838, 158.
—— on a steam-engine boiler, 1838, 162.
—— on the embryogeny of Pulmogrades and Ciliogrades, 1846, 86.
—— on the quasi-osseous system of Acalephæ, 1846, 87.
—— on the geology of a little district of carboniferous limestone, at Llysfaen and Penmaen Rhos, near Abergele, 1854, 93.
*—— on the geology of the district of Great and Little Ormeshead, 1855, 94.
——, notes on animals, 1855, 117.
—— on slickensides, 1859, 123; 1860, 91.
—— on Cydippe, 1859, 155; 1860, 120.
Price (J. T.) on a pair of paddle-wheels fixed on a steamer in substitution of ordinary wheels, 1836, 131.
—— on a method of condensing steam in marine engines, 1851, 116.
Prichard (J.), meteorological register at Beddgelert, Carnarvon, 1842, 25; 1843, 20.
Prichard (Dr. J. C.) on diseases of the brain, 1836, 107.
—— on the extinction of the human races, 1839, 89.
*—— on the position of ethnology as a science, 1847, 126.
Prideaux (J.) on thermo-electricity, 1833, 384.
—— on the causes of the increased destructibility of modern copper sheathing, 1841, 43.
——, notice of some copper which had been acted on by sea-water, 1841, 77.
—— on the extent, causes, and remedies of fungi destructive in agriculture, 1846, 44.
Pring (Dr. J. H.) on the Noctiluca miliaris, the animalcular source of the phosphorescence of the British seas, 1849, 81.
Pritchard (A.), apparatus for illustrating the polarization of light, 1835, 112.
Pritchard (Rev. C.) on a meteor seen at Cheltenham, 1856, 47.
*—— on the gases of the Grotto del Cave, 1856, 58.
Prosser (Mr.), notice of his method of making earthenware or porcelain, 1842, 114.
—— on unchanged steam, 1854, 159.
Prout (Dr. W.), observations on atmospheric air, 1831–32, 570.

PEYER (Prof.) on the different methods employed to estimate the amount of population, 1845, 91.
PUGH (Dr.) on the assimilation of nitrogen by plants, 1857, 51.
—— on a new method for the quantitative estimation of nitric acid, 1858, 64.
*PURDY (F.) on the systems of poor law medical relief, 1860, 195.
PURSER (J. E.), notice of his life-preservers in cases of fire and of shipwreck, 1843, 101.
PYLE (J. C.), meteorological observations made at Futtegurh, N.W. provinces, Bengal, 1851, 39.

QUETELET (Prof.) on the importance of keeping exact registers, in different districts, of Meteorology, Physics, Chemistry, Botany, Agriculture, Zoology, and Man, 1841, 96.
—— on the establishment of a central statistical commission in Brussels, 1841, 98.

*RADCLIFF (Dr. C. B.) on muscular action from an electrical point of view, 1860, 143.
*RADIGUEL (A.) on a fragment of pottery found in superficial deposits in Paris, 1859, 124.
*RAE (Dr. J.) on the Esquimaux, 1856, 119.
—— on the formation of icebergs and ice-action in the Hudson's Bay and Straits, 1860, 174.
*—— on the aborigines of the Arctic and Subarctic regions of North America, 1860, 175.
*RAFNS (Prof.) on the ancient geography of the Arctic regions, 1853, 19.
RAILLARD (l'Abbé) on some problems of meteorology: new and complete explanation of the rainbow, 1857, 35.
*RAINEY (G.) on the structure and mode of formation of starch-granules, 1859, 140.
*RALFS (J.) on the siliceous cells formed in the frustules of Diatomaceæ, 1857, 101.
RAMSAY (Prof. A. C.), notes taken during the surveys for the construction of the geological model maps and sections of the island of Arran, 1840, 92.
*—— on the denudation of South Wales and the adjacent counties, 1845, 50.
—— on the origin of the existing physical outline of a portion of Cardiganshire, 1847, 66.
—— on some points connected with the physical geology of the Silurian district between Builth and Pen-y-bont, Radnorshire, 1848, 73.
—— on the geological position of the black slates of Menai Straits, &c., 1850, 102.
—— on the former probable existence of palæozoic glaciers, 1854, 93.
RAMSAY (Prof. A. C.) on the thickness of the ice of the ancient glaciers of North Wales, and other points bearing on the glaciation of the country, 1854, 94.
—— on a process for obtaining lithographs by the photographic process, 1855, 69.
*—— on the commencement of the geological survey in Scotland, 1855, 95.
*RAMSAY (J. N.), ascent of Mont Blanc by a new route from the side of Italy, 1855, 150.
RANDALL (W. B.) on common salt as a poison to plants, 1848, 58.
RANKIN (Rev. T.) on the temperature of the air at various soundings of Huggate Well, Yorkshire, 1844, 22.
——, singular appearance of a thunderstorm, 1844, 23.
——, thermometrical observations in a deep well at Huggate, 1845, 18.
——, meteorological observations made at Huggate, Yorkshire, 1845, 18; 1847, 18; 1848, 36; 1849, 29; 1850, 42; 1851, 36; 1852, 31; 1853, 32; 1854, 34; 1855, 42; 1856, 47; 1857, 37; 1858, 38; 1859, 52; 1860, 50.
*—— on the ancient tumuli in the Yorkshire Wolds, 1845, 82.
—— on a halo, paraselene, and aurorse boreales, 1846, 15.
—— on the hibernation of snails, 1846, 83.
—— on a singular appearance of the shaded part of the moon, 1847, 18.
—— on phosphoric meteors, 1847, 18.
——, scarlatina increased and aggravated by the want of ventilation, 1847, 95.
—— on a phosphoric phenomenon in a pond, 1849, 29.
*—— on a singular atmospheric wave, 1849, 29.
—— on magnetized brass, 1849, 29.
—— on a mass of chalky gravel at North Dalton, 1851, 69.
*—— on an aurora observed at Huggate, 1852, 31.
*—— on a thunder and rain storm, which commenced in Herefordshire and terminated on the Yorkshire Wolds, 1853, 32.
*—— on a terrific thunder-cloud on the Wolds, 1853, 32.
*—— on the formation of boulders, 1853, 54.
*—— on the Brigantes, the Romans, and the Saxons in the Wolds of Yorkshire, 1853, 91.
—— on the different motions of electric fluid, 1860, 30.
RANKINE (Prof. W. J. M.) on the laws of the elasticity of solids, 1850, 2.
——, results of the hypothesis of molecular vortices, as applied to the theory of elasticity and heat, 1851, 3.
—— on the velocity of sound in liquid and solid bodies of limited dimensions, espe-

cially along prismatic masses of liquid, 1851, 4.
Rankine (Prof. W. J. M.) on the reconcentration of the mechanical energy of the universe, 1852, 12.
—— on the causes of the excess of the mean temperature of rivers above that of the atmosphere, recently observed by M. Renou, 1852, 30.
—— on telegraphic communication between Great Britain and Ireland by the Mull of Cantyre, 1852, 128.
—— on Prof. Smyth's mechanical process for cooling air in tropical climates, 1852, 128.
—— on an oscillatory theory of light, 1853, 9.
—— on a proposed barometric pendulum for the registration of the mean atmospheric pressure during long periods of time, 1853, 26.
—— on some simultaneous observations of rain-fall at different points on the same mountain range, 1854, 46.
—— on formulæ for the maximum pressure and latent heat of vapours, 1854, 58.
—— on the means of realizing the advantages of the air-engine, 1854, 159.
——, opening remarks on the objects of the Mechanical Section at Glasgow, 1855, 201; concluding address, 211.
—— on practical tables of the latent heat of vapours, 1855, 208.
—— on the operation of the patent laws, 1855, 208.
—— on the principle of the transformation of structures, 1857, 189.
—— on the experiments by Messrs. Napier and Sons, on the strength of wrought iron and steel, 1859, 242.
Ransom (Dr. W. H.) on the structure of the ova of fishes, with especial reference to the micropyle, and the phenomena of their fecundation, 1855, 131.
Ransome (F.) on soluble silicates, and some of their applications, 1859, 78.
*Rathbone (T. W.) on a proposed plan for decimal coinage, 1853, 112.
—— on the plans which have been proposed of decimal accounts and coinage, 1854, 143; 1855, 184.
Ravenstein (M. A.) on relief maps, 1840, 122.
Rawson (R.) on the summation of infinite series, 1844, 2.
—— on the friction of water, 1849, 3.
—— on elliptic integration, 1849, 4.
—— on the oscillations of floating bodies, 1849, 5.
Rawson (W. R.) on the number of fires in the metropolis and its vicinity, from 1833 to 1837, 1838, 170.
——, report of the Railway Commissioners in Ireland, 1838, 171.
—— on the criminal statistics of England and Wales, 1839, 117.
Rayners (Mr.) on a machine regulator, 1840, 209.
Read (G.) on ropy bread, 1850, 60.
Read (Dr. J.) on the iriscope, 1840, 14.
——, experiments in thermo-electricity, 1846, 46.
Reade (Rev. J. B.) on the solid materials found in the ashes of plants, 1837, 103.
—— on the chemical composition of vegetable membrane and fibre, 1837, 104.
—— on Liebig's theory of fallow crops, 1842, 64.
—— on the cilia and ciliary currents of the oyster, 1845, 66.
—— on two new salts of gold, 1847, 57.
—— on a new solid eyepiece, 1850, 15.
—— on photographs of the moon and of the sun, 1854, 10.
—— on a new method of forming ammonio-iodides of metals, 1857, 55.
—— on animal ammonia, its formation, evolution, and office, 1858, 65.
Rebmann (the Rev. J.), letter to the Rev. H. Venn, from Kisaludini (in Rabbai), 1854, 123.
Redfern (Dr. P.) on the connexion between cartilage and bone, 1853, 71.
—— on the nature of the Torbanehill and other varieties of coal, 1854, 102.
——, photographs on glass of histological and natural-history objects, 1855, 118.
—— on a method of applying the compound microscope to the sides or top of aquaria less than 2 feet in height, 1857, 106.
—— on Flustrella hispida, 1857, 106.
—— on the method of production of sound by a species of Notonecta, 1859, 173.
—— on the admixture of nervous and muscular fibres in the nerves of the Hirudo medicinalis and other leeches, 1859, 174.
—— on the structure of the otoliths of the cod (Gadus morrhua), 1859, 174.
Redfield (W. C.) on American storms and tornadoes, 1840, 40.
Redtenbacher (Prof.) and Dr. Varrentrapp on the constitution and products of the distillation of fat bodies, 1840, 76.
Rees (Dr. G. O.) on the liquor amnii, 1838, 126.
—— on the existence of fluoric acid as a constituent of certain animal substances, 1839, 56.
*—— on the preservation of subjects for anatomical purposes, 1840, 156.
Reeve (Lovell) on the dissimilarity in the calcifying functions of mollusks, 1846, 82.
—— on a new species of Argonaut, A. Owenii, with observations on the A. gondola, Dillwyn, 1848, 80.
—— on the discovery of a living representative of a small group of fossil Volutes

occurring in the tertiary rocks, 1849, 64.
Reeve (Lovell) on the geographical distribution of the land mollusca, 1851, 82.
—— on the Aspergillum or watering-pot mollusk, 1860, 120.
Reich (Prof.), researches on the electrical currents on metalliferous veins, 1839, 34.
Reichenbach (Dr.) on the products of destructive distillation, 1834, 591.
Reid (Dr. D. B.) on the construction of public buildings in reference to sound, 1835, 14.
—— on the extension of the study of physics, 1835, 126.
—— on the amount of air required for respiration, 1838, 131.
——, notice of a chemical abacus, 1839, 65.
*—— on the ventilation of ships, 1841, 82.
Reid (Dr. J.) on the connexion between the nervous system and the irritability of muscles in living animals, 1834, 671.
—— on the glosso-pharyngeal, pneumogastric and spinal accessory nerve, 1837, 109.
—— on the functions of the eighth pair of nerves, 1838, 124.
—— on the manner in which the vital actions are arrested in asphyxia, 1840, 151.
—— on the anatomical relation of the blood-vessels of the mother to those of the fœtus in the human species, 1840, 153.
—— on the anatomy of the medulla oblongata, 1840, 154.
—— on the connexion between the nervous system and muscular contractility, 1840, 155.
Reid (John) on the progressive rates of mortality, as occurring in all ages, and on certain deviations, 1855, 186.
Reid (Dr. R.) on the functions of the nervous system, 1836, 119.
Reid (Colonel W.) on the blue colour of the sun, 1840, 10.
—— on the law of storms, 1838, 21.
——, law of storms—on mooring ships in revolving gales, 1851, 36.
*Reilly (C.) on the longitudinal stress of the plate girder, 1860, 212.
Remak (Prof.) on the mode of action of the galvanic stimuli directly applied to the muscles, 1855, 131.
Remington (G., jun.) on a railway balance lock, 1837, 129.
Rendel (J. M.) on a system of trussing for the roadways of suspension-bridges, 1841, 102.
Rennie (G.) on an instrument for taking up water at great depths, 1834, 595.
—— on the propulsion of vessels by the trapezium paddle-wheel and screw, 1841, 101.
*Rennie (G.) on the iron lock-gates of Sevastopol, 1847, 132.
*——, hydrographical remarks on the improvement of the port of Liverpool, 1854, 124.
—— on the effects of screw propellers when moved at different velocities and depths, 1855, 209.
—— on the quantity of heat developed by water when rapidly agitated, 1856, 165; 1857, 190.
——, experiments to determine the resistances of screw propellers when revolving in water at different depths and velocities, 1856, 169; 1857, 189.
—— on the construction of floating and fixed batteries, 1858, 220.
*Rennison (Rev. T.) on a new proof of Pascal's theorem, 1860, 6.
Retzius (Prof.) on the ethnographical distribution of round and elongated crania, 1846, 116.
*—— on a Finlandic vocabulary, 1849, 86.
—— on certain American, Celtic, Cimbric, Roman, and ancient British skulls, 1849, 86.
—— on the antrum pylori in man and animals, 1855, 132.
—— on the peculiar development of the vermis cerebelli in the albatros, 1855, 133.
—— on the fornix cerebri in man, mammals, and other vertebrata, 1855, 133.
—— on the pelvis of a Lapland giantess, 1855, 134.
—— on an episcaphoid bone in both hands of a Guarani man, 1855, 134.
—— on Celtic, Sclavic and Aztec crania, 1855, 145.
Reynolds (R.) on the practical application of aluminium, 1858, 66.
Ricardo (M.) on a machine for registering the velocity of railway trains, 1846, 114.
Richards (Rev. W.) on the natives of the Hawaiian Islands, 1844, 82.
Richardson (Mr.) on the history of the magnesian limestones, 1842, 37.
Richardson (Mr.) on the state of crime in the Gorbals, Glasgow, 1840, 177.
Richardson (Dr. B. W.) on the cause of the fluidity of the blood, 1856, 98.
—— on the process of oxygenation in animal bodies, 1860, 143.
*—— on an electro-magnetic railway break, 1860, 212.
Richardson (Henry), tubular or double life-boat, 1853, 113.
Richardson (Sir J.) on pouched rats, 1838, 105.
—— on three new genera of marine fishes from Van Diemen's Land, 1841, 71.
—— on Machærium subducens from Port Essington, New Holland, 1842, 69.
—— on the case of a diver employed on the wreck of the Royal George, who was in-

jured by the bursting of the air-pipe of the diving apparatus, 1842, 84.
Richardson (Sir J.), notice of a beetle found alive in artificial concrete, 1846, 82.
—— on electric fishes, 1857, 115.
——, abstract of Mr. Anderson's report of a searching party down the Great Fish River in quest of the remains of the crews of the 'Erebus' and 'Terror,' 1857, 148.
Richardson (J.) on a native Touarick alphabet, 1847, 126.
*—— on the medicinal leech, 1854, 113.
Richardson (T.) on emulsin, 1838, 48.
——, examination of sphene, 1838, 49.
—— on the composition of idocrase, 1839, 52.
Riddell (Lieut.), curves representing the simultaneous changes of the magnetic elements, 1841, 26.
Rigaud (Prof.), notice relative to the discovery of the satellites of Jupiter, 1831–32, 613.
Rigg (R.), inquiry into a peculiar property of the earth, 1837, 50.
—— on the formation or secretion of carbon by animals, 1844, 33.
Riley (E.) on fused wrought iron, 1857, 57.
Riley (Dr. H.) on an additional species of saurian found near Bristol, 1836, 90.
—— on the foot of the two-toed ostrich, 1836, 98.
Ritchie (Mr.) on warming and ventilating buildings, 1840, 214.
Ritchie's (E. S.) powerful induction apparatus, account of, 1857, 15.
Robb (Dr. J.) on certain geological features of the river St. John, in New Brunswick, with an account of the falls upwards from the sea, 1840, 115.
—— on an anomalous form of the plum observed in the gardens of New Brunswick, 1840, 148.
*Robb (J.) on the comparative value of propellers, 1859, 243.
Roberton (J.) on the period of puberty in negro women, 1842, 82.
Roberts (Mr.) on a machine which renders objects visible while revolving 200,000 times in a minute, 1835, 113.
Roberts (G.) on a remarkable tide in the British Channel, 1848, 37.
Roberts (H.) on various efforts to improve the domiciliary condition of the labouring classes, 1860, 196.
Roberts (R.) on a new element of mechanism, 1848, 119.
—— on the sheet-metal moulding machine, 1849, 126.
—— on correct sizing of toothed wheels and pinions, 1849, 127.
—— on the eccentric sheet-metal and wire-gauge, 1849, 128.
——, apparatus by which the influx and reflux of the tide are rendered available as agents for effecting the motions of clockwork, 1849, 128.
Roberts (R.) on the expansion of solids by heat, 1850, 16.
—— on mechanism to explain the pendulum experiment, 1851, 117.
*—— on certain improvements in the construction of steam-ships, life-boats, and other vessels, also in steam-boilers, propellers, anchors, windlasses, and metallic casks, 1853, 121.
*Robertson (J.) on Pholas, 1851, 82.
Robertson (Capt.), ascent of the mountain Sumeru Parbut, 1855, 150.
Robinson (Rev. Dr. E.) on the Wadi el'Arabah in Syria, 1840, 121.
Robinson (Sir G.) on moon blindness, 1858, 19.
*Robinson (R.), a new reaping-machine, 1852, 129.
Robinson (Rev. Dr. T. R.) on the visibility of the moon in total eclipses, 1834, 552.
—— on the parallax of α Lyræ, 1837, 3.
—— on determining the index error of a circle by reflexion of the wires of its telescope, 1843, 16.
—— on the barometric compensation of the pendulum, 1843, 17, 102.
——, notice of E. J. Cooper's catalogue of 50 telescopic stars, 1843, 18.
—— on the influence which finely divided platina exerts on the electrodes of a voltameter, 1846, 46.
——, modification of Dr. Whewell's anemometer for measuring the velocity of the wind, 1846, 111.
—— on the electrolysis of water, 1847, 52.
—— on shooting-stars seen at Armagh, 1848, 37.
——, notice of Sharp's universal sun-dial, 1849, 34.
—— on drawings to illustrate recent observations on nebulæ, 1852, 22.
—— on transit-observations of the moon, 1857, 27.
*——, address as President of Section A. at the Dublin Meeting, 1857, 1.
Robison (Sir J.), linseed-oil barometer, 1831–32, 86.
—— on a method of measuring the interval and the velocity of waves at sea, 1836, 130.
—— on a barometrical instrument for travellers in mountainous districts, 1838, 37.
—— on coal-gas as the cheapest fuel for cooking, 1838, 159.
——, notice of the bucket of a pump in use in Sweden, 1838, 159.
—— on a new optical instrument, 1842, 27.
—— on Mr. Prosser's method of making earthenware or porcelain from

dry powder of clay compressed, 1842, 114.
Rogers (Prof. H. D.) on the geology of Pennsylvania, 1848, 74.
*—— on some of the geological functions of the winds, illustrating the origin of salt, &c., 1855, 95.
*—— on the geology of the United States, 1855, 95.
*—— on some reptilian footprints from the carboniferous strata of Pennsylvania, 1855, 95.
*—— on the origin of saliferous deposits, 1856, 75.
*—— on the correlation of the North American and British palæozoic strata, 1856, 175.
*—— on the geological survey of Pennsylvania, 1857, 89.
*—— on the discovery of strata of supposed Permian age in the interior of North America, 1858, 224.
*—— on some observations on the parallel roads of Glenroy, 1859, 265.
*—— on some phenomena of metamorphism in coal in the United States, 1860, 101.
Rogers (Profs. H. D. and W. B.) on the physical structure of the Appalachian chain, as exemplifying the laws which have regulated the elevation of great mountain chains generally, 1842, 40.
—— on the phenomena and theory of earthquakes, 1843, 57.
Rogers (J. W.) on the nutritive properties of the potato, when properly manipulated, as compared with wheat, &c., 1857, 57.
—— on some of the medicinal and chemical properties of carbonized peat moss, 1857, 58.
Rogers (Prof. W. B.), general sketch of the structure of Virginia, with especial reference to the faults in the Alleghanies, 1849, 65.
*—— on the discovery of Paradoxides in New England, 1857, 89.
Rogers (Profs. W. B. and R. E.) on a new process for analysing graphite, natural and artificial, 1848, 59.
—— on the oxidation of the diamond in the liquid way, 1848, 60.
*—— on the absorption of carbonic acid by sulphuric acid, 1848, 61.
—— on the decomposition and partial solution of minerals, rocks, &c. by pure water and water charged with carbonic acid, 1849, 40.
*Rogers (Prof. W. B., of Boston, U.S), ozone observations, 1857, 58.
—— on a very powerful induction apparatus devised by Mr. E. S. Ritchie, 1857, 15.
——, experiments and conclusions on binocular vision, 1860, 17.
—— on the phenomena of electrical vacuum-tubes, 1860, 30.
*Ronalds (Prof. E.) on the oil of the sunfish, 1852, 39.
Ronalds (F.) on the meteorological observations at Kew, with an account of the photographic self-registering apparatus, 1846, 10.
——, notice of observations carried on at the Kew observatory, 1847, 30.
*Rook (Mr.) on the tidal phenomena in the Bay of Fundy and the River de la Plata, 1842, 22.
Rooke (J.) on the relative age and true position of the millstone grit and shale, 1844, 51.
Rootsey (Dr. S.) on the higher orders of Grecian music, 1836, 37.
—— on mnemonical logarithms, 1836, 38.
*—— on Aranea avicularia, 1836, 98.
—— on sugar, malt, and an ardent spirit from mangel wurzel, 1836, 107.
Roscoe (Dr. H. E.), photochemical researches with reference to the laws of the chemical action of light, 1855, 48.
Rose (A.) on the discovery of plumbago or graphite in the island of Mull, Hebrides, 1850, 102.
Rose (C. B.), notice of the antler of a reindeer found below the cliff near Southwold, Suffolk, 1851, 69.
—— on the discovery of a new Talpina?, 1852, 55.
Rose (Prof. H.) on a new metal, Pelopium, 1846, 37.
Rosen (Count Adolphe de) on maps of Sweden, 1847, 67.
Ross (Rear Admiral Sir John) on the aurora borealis, 1835, 18; 1852, 31; 1855, 42.
*—— on errors which may be occasioned by disregarding the influence of solar or artificial light on magnets, 1854, 12.
—— on the deviation of the magnetic needle peculiar to Liverpool, 1854, 12.
Rosse (Earl of) on the nebula 25 Herschel, or 61 of Messier's catalogue, 1845, 4.
—— on plain specula of silver for reflecting telescopes, 1851, 12.
——, drawings to illustrate recent observations on nebulæ, with remarks by Rev. Dr. Robinson, 1852, 22.
——, address as President of the Mechanical Section, 1857, 175.
——, address as President of the Mathematical Section, 1859, 1.
*Rotch (Mr.) on the state of the patent laws, and the influence of those laws on the progress of the mechanical arts, 1831–32, 613.
*Roth (Dr. M.) on the application of physiological principles to gymnastic education, 1855, 134.
——, aphoristic notes on sanitary statistics of workhouses and charitable institutions, 1856, 149.
Rowell (G. A.) on the formation of rain, 1840, 47.

ROWELL (G. A.) on the cause of the aurora, &c., 1840, 48.
—— on the cause of the aurora, and the declination of the needle, 1847, 41.
—— on the cause of evaporation, rain, hail-stones, and the winds of temperate regions, 1847, 41.
ROWLEY (S.) on a new rotatory steam-engine, 1838, 162.
ROWNEY (Dr. T. H.) on the composition of vandyke-brown, 1855, 70.
—— on the composition of two mineral substances employed as pigments, 1855, 70.
—— on the analysis of some Connemara minerals, 1860, 71.
—— on the composition of jet, 1860, 72.
ROYLE (Prof.) on caoutchouc, 1836, 105.
—— on the different species of cotton plants, and of the culture of cotton in India, 1842, 61.
—— on the geographical distribution of plants in British India, 1845, 74.
—— on the geographical distribution of the flora of India, and on the vegetation of its lakes, 1846, 74.
—— on the black and green teas of commerce, 1852, 69.
*RUMBALL (Mr.) on asthma, 1841, 80.
RUMSEY (H. W.) on the territorial distribution of the population, for purposes of sanitary inquiry and social economy, 1856, 151.
RUNDELL (W.), magnetic experiments made on board the 'Great Eastern' steamship, 1857, 22.
RÜPPELL (Dr.) on the effects of poisons on the animal economy, 1834, 681.
RUSH (G.) on observations of the barometer and thermometer made during ascents in balloons, 1849, 29.
*RUSSELL (Rev. Dr. C.) on the inhabitants and dialect of the Barony of Forth in the county of Wexford, 1857, 149.
RUSSELL (J. S.) on the reduction of an anomalous fact in hydrodynamics, and on a new law of the resistance of fluids, 1834, 531.
—— on the motion of floating bodies, 1835, 16.
—— on the solid of least resistance, 1835, 107.
*—— on the ratio of the resistance of fluids to the velocity of waves, 1836, 41.
*—— on the navigation of shallow rivers, 1836, 130.
—— on the mechanism of waves, in relation to steam navigation, 1837, 130.
—— on improvements in tidal rivers, 1837, 131.
—— on the construction of sea walls and embankments, 1837, 133.
—— on the resistance of water, 1838, 163.
—— on the economical proportion of power to tonnage in steam-vessels, 1839, 124.
RUSSELL (J. S.) on the temperature of most effective condensation in steam-vessels, 1840, 186.
—— on the most economical and effective proportion of engine power to the tonnage of the hull in steam-vessels, 1840, 188.
——, report of a Committee on waves, 1842, 19.
—— on an indicator of speed of steam-vessels, 1842, 109.
—— on the abnormal tides of the Firth of Forth, 1842, 115.
—— on the application of our knowledge of the laws of sound to the construction of buildings, 1843, 96.
—— on the tides of the east coast of Scotland, 1844, 6.
—— on the nature of the sound wave, 1844, 11.
—— on the resistance of railway trains, 1844, 96.
—— on the law which governs the resistance to motion of railway trains at high velocities, 1846, 109.
—— on certain effects produced on sound by the rapid motion of the observer, 1848, 37.
—— on applications of the wave principle to the practical construction of steam-vessels, 1849, 30.
—— on the progress of naval architecture and steam navigation, including a notice of the large ship of the Eastern Steam Navigation Company, 1854, 160.
——, mechanical structure of the 'Great Eastern' steamship, 1857, 195.
RUSSELL (R.) on the passage of storms across the British Islands, 1850, 42.
——, observations on storms, 1851, 34.
—— on the action of the winds which veer from the south-west to west, and north-west to north, 1853, 32.
—— on the meteorology of the United States and Canada, 1855, 42.
RUSSELL (W.) on the herring fishery averages of Wick district, 1854, 176.
RUTHERGLEN (Mr.) on the state of crime within the suburban districts of Glasgow, 1840, 175.
RUTHVEN (M. W.) on improvements in propelling and navigating steam-vessels, 1850, 186.
RYAN (Mr.) on the application of water as a moving power, 1843, 99.
RYLAND (A.) on the income of scientific and literary societies, and the amount paid for rates and taxes, 1841, 95.

SABINE (General) on the agency of glaciers in transporting rocks, 1843, 62.
—— on the amount and frequency of the magnetic disturbances and of the aurora at Point Barrow, on the shores of the Polar Sea, 1857, 14.

SACC (Dr.) on the chemical and physiological effects of feeding fowls, and on the changes and chemical composition of eggs during incubation, 1848, 89.
SADLER (J. H.) on Indian fibres, 1858, 195.
*SALMON (Rev. Dr. G.) on the surface of centres of an ellipsoid, 1857, 4.
SALTER (Dr. BELL), notice of his directions to botanists in the Isle of Wight, 1846, 86.
—— on the true nature of the tendril in the cucumber, 1846, 88.
SALTER (J. W.) on the structure and relations of Cornulites, and other allied Silurian fossils, 1845, 57.
*—— on some important additions to the fossils of the Silurian rocks, 1845, 57.
—— on a system of colour for all geological maps, 1847, 69.
—— on the fossils of the lower and upper Silurian rocks of Canada, 1851, 63.
—— on the lowest fossiliferous beds of North Wales, 1852, 56.
—— on a few genera of Irish Silurian fossils, 1852, 59.
*—— on some fossils from the Cambrian rocks of the Longmynd, Shropshire, 1855, 95.
—— on some additions to the geology of the Arctic regions, 1855, 211.
—— on the great Pterygotus (Seraphim) of Scotland, and other species, 1856, 75.
—— on some new palæozoic starfishes, compared with living forms, 1856, 76.
—— on the fossils of the lower or Wenlock group, Dingle Promontory, co. Kerry, 1857, 71.
—— on the fossils from Durness, 1857, 83.
—— on the fossils of the Dingle district, 1857, 89.
SAMUDA (Mr.) on Cliff's dry gas-meter, 1838, 158.
SAMUEL (Mr.) on an early form of the lenticular stereoscope constructed for the use of schools, 1858, 19.
SAMUELSON (B.) on improvements in machines for tilling land, 1853, 121.
SAMUELSON (J.) on the development of infusorial animalcules, 1856, 98.
SANDBACH (Mr.), notice of a new Prionites from Mexico, and new species of titmouse, 1837, 99.
SANDEMAN (P.), tables of rain registered at Georgetown, Demerara, 1859, 52.
SANDERS (W.) on a raised sea-beach at Woodspring-hill, near Bristol, 1840, 102.
—— on sections of the railway between Bristol and Bath, 1841, 67.
—— on railway sections made on the line of the Great Western Railway, between Bristol and Taunton, 1846, 59.
—— on the age of the Saurians named Thecodontosaurus and Palæosaurus, 1849, 65.
SANDERS (Mr.), notice of an engraving done by a machine, being a combination of circular and straight line engraving, 1840, 211.
SANDERSON (J. S.) on the supposed relation of the spleen to the origin of the coloured blood-corpuscle in the adult, 1850, 134.
*SANDLAND (J. D.) on sea Medusæ, 1855, 117.
*SAULL (W. D.), teeth of the fossil hippopotamus, from a gravel-pit near Huntingdon, 1834, 666.
*—— on the ethnology and archæology of the Norse and Saxons, in reference to Britain, 1851, 90.
*—— on the supposed action of water in geological formations, and the position of the poles of the earth, 1852, 61.
SAUNDERS (Capt. J.), design for safety harbours, 1852, 129.
SAUNDERS (T.) on the variations of climate within the tropics, in connexion with the vertical action of the sun and the actual motion of the earth, especially with reference to the climate of the Gulf of Carpentaria in North Australia, 1853, 91.
SAUNDERSON (Mr.) on yew trees in Ireland, 1835, 76.
SAXBY (S. M.) on the connexion between magnetic variation with certain peculiarities of the earth's structure, 1845, 16.
*SAXBY (Mr.) on mechanical appliances on board merchant ships, 1854, 161.
SCANLAN (R.) on a fluid obtained in manufacturing pyroxylic spirit, 1835, 40.
—— on a new substance (eblanine) obtained from the distillation of wood, 1836, 76.
—— on the constitution of the commercial carbonate of ammonia, 1838, 63.
—— on the blackening of nitrate of silver by light, 1838, 63.
SCHAFHAEUTL (Dr.) on the combinations of the constituents of cast iron, steel, and malleable iron, 1839, 49.
—— on the relation of form to chemical composition, 1840, 65.
—— on a new compound of arsenious and sulphuric acids, 1840, 69.
—— on a new method of photogenic drawing, 1840, 71.
—— on klinology in reference to the Bavarian Alps, 1851, 69.
*SCHARLING (Prof. E. A.) on the action of superheated steam upon organic bodies, 1851, 51.
SCHIEDE (Dr.) on the Oxalis tuberosa, Solanum tuberosum, Cevadilla, Amole, &c., 1835, 77.
SCHLAGINTWEIT (A. and R.), notices of journeys in the Himalayas of Kemaon, 1855, 152.
SCHLAGINTWEIT (A.), notice of his death, 1858, 152.

SCHLAGINTWEIT (Lieut. E.) on the tribes composing the population of Morocco, 1860, 177
SCHLAGINTWEIT (H. von) on some of the races in India and Upper Asia, 1857, 151.
——, general abstract of the results of Messrs. de Schlagintweit's magnetic survey of India, 1860, 32.
SCHLAGINTWEIT (H. and R.) on erosion of rivers in India, 1857, 90.
—— on some of the animals of Tibet and India, 1857, 106.
SCHLAGINTWEIT (H., A., and R.) on the routes pursued in India, the Himalayas, Tibet, and Turkistan, 1857, 149.
SCHLAGINTWEIT (R. von) on thermo-barometers, compared with barometers at great heights, 1860, 50.
—— on some of the races of India and High Asia, 1860, 175.
SCHLOSSBERGER (Prof.) on the chemistry of fœtal life, 1855, 135.
SCHOMBURGK (Sir R. H.) on the various modes of fishing employed by Indians in the west of Guiana, 1840, 135.
——, description of Alexandria imperatricis, a new species of Papilionaceæ, 1844, 71.
—— on a new species of Barbacenia, 1844, 71.
—— on the Ophiocaryon paradoxa, the snake-nut tree, 1844, 71.
—— on the Calycophyllum Stanleyanum, 1844, 71.
—— on Lightia lemniscata, a new genus of the Buttneriaceæ, 1844, 71.
—— on two new species of the family Laurineæ, 1844, 72.
—— on the forest trees of British Guiana, 1844, 72.
—— on the natives of Guiana, 1844, 83.
—— on the lake Parima, the El Dorado of Sir Walter Raleigh, and the geography of Guiana, 1845, 50.
—— on the Murichi, or Ita Palm, of Guiana, 1845, 71.
*—— on the superstitious and astronomical knowledge of the Indians of Guiana, 1845, 82.
*—— on sugar from potatoes, 1847, 57.
—— on the geological structure of Barbadoes, and on Ehrenberg's Polycystina, a new section of animalcules from Barbadoes, 1847, 70.
——, remarks to accompany a comparative vocabulary of eighteen languages and dialects of Indian tribes inhabiting Guiana, 1848, 96.
—— on a uniform system to reduce unwritten languages to alphabetical writing in Roman characters, 1848, 99.
——, ethnological researches in Santo Domingo, 1851, 90.
SCHÖNBEIN (Prof.), new electro-chemical researches, 1839, 31.
SCHÖNBEIN (Prof.) on the electrolysing power of a simple voltaic circle, 1842, 30.
*—— on a peculiar condition of iron, 1842, 40.
—— on a peculiar formation of permanganic acid, 1847, 57.
SCHOOLCRAFT (Rev. Mr.) on the production of sand storms and lacustrine beds, by causes associated with the North American lakes, 1842, 42.
SCHOOLCRAFT (H. R.) on the languages of America, 1844, 83.
SCHROETTER (Prof.) on the allotropic condition of phosphorus, 1849, 42.
*SCHUNCK (Dr. E.) on a white crystalline substance obtained from lichens, 1841, 53.
—— on some products of the decomposition of erythrin, 1844, 31.
—— on the products of the decomposition of chrysammic acid, 1847, 58.
SCHWABE (L.) on spinning glass, 1842, 114.
SCHWEITZER (E. G.), analysis of three species of Fucus, 1845, 37, 38.
SCLATER (Dr. P. L.) on the geographical distribution of recent terrestrial vertebrata, 1860, 121.
SCOFFERN (Dr.) on the combined use of the basic acetates of lead and sulphurous acid in the colonial manufacture of sugar, 1849, 42.
—— on the sugar produce of the south of Spain, chiefly in connexion with the employment of acetate of lead and sulphurous acid as purifying agents, 1850, 60.
—— on gambogic acid and the gambogiates, and their use in artistic painting, 1851, 51.
*SCOFFERN (T.) on waterproof and unalterable small-arm cartridges, 1860, 72.
SCORESBY (Rev. Dr. W.) on magnetic phenomena, 1831–32, 80.
——, account of some extraordinary effects of lightning on the packet-ship 'New York,' 1831–32, 567.
—— on a peculiar source of error in experiments with the dipping-needle, 1833, 412.
—— on a new compass bar, 1836, 28.
—— on improved magnets, and the different modes of determining their powers, 1842, 19.
—— on the circumstances which affect the energy of artificial magnets, 1843, 13.
*——, notice of a trigonometrical indicator, 1843, 101.
—— on a new process of magnetic manipulation, and its action on cast iron and steel bars, 1844, 12.
—— on steam navigation in America, 1844, 97.
—— on a new process of magnetic manipulation, with its effects on hard steel and cast iron, 1844, 100.
—— on a large magnetic machine, 1845, 15.

*Scoresby (Rev. Dr. W.) on the mode of developing the magnetic condition, 1846, 35.
—— on the defects of and danger arising from the use of corrective magnets for local attraction on the compasses of iron-built vessels, 1847, 31.
—— on Atlantic waves, their magnitude, velocity, and phenomena, 1850, 26.
—— on the surface-temperature and great currents of the North Atlantic and Northern Oceans, 1853, 18.
—— on deep-sea soundings, and errors therein from strata-currents, with suggestions for their investigation, 1853, 22.
—— on the popular notion of an open Polar sea, 1853, 92.
—— on railway accidents by collision, and their prevention, 1853, 125.
—— on pictorial and photochromatic impressions on the retina of the human eye, 1854, 12.
—— on the loss of the 'Tayleur,' and the changes in the action of compasses in iron ships, 1854, 49.
—— on the principles and measures on which safety in the navigation of iron ships may be reasonably looked for, 1854, 53, 161.
—— on the magnetism of iron ships, and its changes, 1855, 12.
Scouler (Dr.), geological map of the environs of Dublin, 1835, 58.
Scully (V.) on the population of Ireland at different intervals from 1603 to 1856, with causes for periodical increase or decrease, 1856, 142.
Searle (Dr. C.) on the cause of the blood's circulation through the liver, 1846, 93.
Sedgwick (Rev. Prof. A.) on the geology of Caernarvonshire, 1831–32, 591.
——, classification of the old slate rocks of the north of Devonshire, 1836, 95.
—— on the Silurian and Cambrian systems, 1835, 59.
—— on an incursion of the sea into the collieries at Workington, 1837, 75.
—— on the geology of the neighbourhood of Cambridge, including the formations between the chalk escarpment and the great Bedford level, 1845, 40.
—— on the geological structure and relations of the frontier chain of Scotland, 1850, 103.
—— on the classification and nomenclature of the older palæozoic rocks of Britain, 1853, 54.
*—— on the May Hill sandstone, and the palæozoic system of England, 1854, 95.
*—— on faults in Cumberland and Lancashire, 1859, 265.
*—— on the geology of the neighbourhood of Cambridge and the fossils of the upper greensand, 1860, 101.
Segelcke (T.) on the current methods for estimating the cellular matter, or "woody fibre," in vegetable food-stuffs, 1859, 79.
Selby (P. J.), notice of birds observed in Sutherlandshire, 1834, 610.
—— on the orbital glands in birds, 1834, 609.
Selkirk (Rev. J.) on the causes, extent, and preventives of crime, with especial reference to Hull, 1853, 112.
Seller (Dr. W.) on a physiological mode of resolving the metaphysical difficulties as to the origin of the notion of space, of motion, of the external, of substance, &c., 1850, 135.
Selvester (Rev. Mr.) on the depression of the coast of the Färoe Islands, 1840, 123.
Selwyn (Rev. W.), Sir D. Brewster on the cause of an optical phenomenon observed by, 1844, 8.
Senior (N. W.), address as President of Section F. at Oxford, 1860, 182.
Serrin (M.), "régulateur automatique de lumière électrique," 1860, 19.
*Sewell (J.) on steam-boiler explosions, 1854, 162.
Seymour (D.) on the Caucasus and parts of the Crimea, 1854, 124.
*——, travels of General Fevrier in Central Asia, 1854, 125.
Shaffner (Colonel) on the geography of the North-Atlantic telegraph, 1860, 178.
Shand (Mr.) on the agency of sound, 1840, 52.
*Sharp (J.) on the comparative value of the different kinds of gas-meters, 1846, 114.
Sharp (W.) on the formation of local museums, 1839, 65.
—— on the ashes of wheat, 1845, 36.
Sharpey (Dr.) on the anatomy of the blood-vessels of the porpoise, 1834, 682.
Shaw (Mr.) on a new steam-engine worked with three kinds of pressure, 1842, 111.
Shaw (A.) on some peculiarities in the circulation of the liver, 1842, 79.
Shaw (Sir C.) on the criminal statistics of Manchester, 1842, 92.
Shaw (Dr. N.) on the distribution of population in the Cimbric Chersonese, 1847, 79.
*—— on the races of the Cimbric Chersonese, 1847, 126.
*——, commercial documents relating to the eastern horn of Africa, 1852, 113.
—— on the geography of British North America, more particularly British Columbia, Frazer River, &c., 1858, 153.
*—— on the proposed railway communication between the Atlantic and Pacific oceans *viâ* the United States of America, 1859, 266.
Shepard (Prof. C. U.), observations on meteoric iron found in the United States, 1839, 54.
——, notice of organic remains from the limestones of North America, 1839, 78.

SHORT (Mrs.) on the natives of Timor and Macassar, 1846, 115.
*—— on the inhabitants of Port Essington, 1846, 117.
SHORTREDE (Colonel) on the force of vapour, 1846, 16.
—— on a chart of the dew-point, 1847, 42.
—— on calculating lunars, 1859, 4.
—— on an improvement in the proportional compass, 1859, 63.
*—— on decimal coinage, 1859, 223.
SHUTTLEWORTH (Mr.) on the vital statistics of the spinners and piecers employed in the fine cotton mills of Manchester, 1842, 93.
SIBBALD (Dr.) on a new plan for a ship communicator, 1856, 164.
SIBSON (Mr.) on an apparatus for delineating correctly the relative position and size of the viscera, either in the healthy condition or changed by disease, 1845, 85.
*SIEGFRIED (Dr.) on an inscription in the language of ancient Gaul, and on the recent researches of Zeuss and others into that language, 1857, 154.
SIEMENS (C. W.) and M. WERNER, outline of the principles and practice involved in dealing with the electric conditions of submarine electric telegraphs, 1860, 32.
SILBERMANN (T. J.) on a method for the spherical printing of globes, 1858, 154.
—— on a universal printing-press, 1858, 220.
*—— on a universal cock, 1858, 221.
SILJESTRÖM (Dr.) on those variations of the force and the direction of the terrestrial magnetism which seem to depend on the aurora borealis, 1848, 4.
—— on the conditions of equilibrium in a rotating spheroid, 1858, 5.
—— on the distribution of heat in the interior of the earth, 1858, 23.
—— on the magnetic dip at Stockholm, 1858, 27.
—— on the constitution of comets, 1858, 30.
—— on observations of temperature, 1858, 39.
SILVER (S. W.) on gutta percha and india rubber as insulators for subaqueous telegraphic wires, 1860, 212.
*SILVER (T.) on the importance of regulating the speed of marine engines, 1857, 198.
SIM (W.) on the blasting and quarrying of rocks, 1855, 209.
SIMMONDS (P. L.) on rain-falls for a series of years at home and in foreign countries, 1855, 45.
—— on the growth and commercial progress of the two Pacific states of California and Australia, 1855, 188.
——, statistics of newspapers of various countries, 1855, 188.
SIMONS (W.) on improvements in iron shipbuilding, 1860, 212.
SIMPSON (Dr. J.) on the temperature of the air at Point Barrow, 1857, 37.
SIMPSON (J. G.) on the contagiousness of cholera, 1837, 108.
SIMS (Mr.) on some specimens of borate of lime, 1854, 75.
SLANEY (Mr.) on wages in manufacturing districts, 1837, 138.
SLEIGH (Capt. A. W.) on the buoyant floatwater, 1843, 102.
*SLIMON (R.) on new forms of Crustacea from the district of Lesmahago, 1855, 96.
SLOPER (G. B.) on the filtration of water for the supply of towns, 1844, 102.
*SMITH (Mr.) on the drainage of railway embankments and slopes, 1840, 209.
*—— on timber bridges, 1840, 209.
—— on propelling boats on canals, 1840, 209.
*—— on propelling boats, 1844, 98.
*SMITH (A.) on a graphic method of correcting the deviations of a ship's compass, 1854, 13.
—— on the origin of wire rope, its qualities and economy, 1854, 162.
SMITH (C. ROACH) on a Roman sepulchral inscription on an Anglo-Saxon urn in the Faussett collection, 1855, 145.
SMITH (Dr.) on the action of nitric acid on naphtha, 1844, 33.
*SMITH (Dr. E.) on a new method of determining the quantity of carbonic acid contained in the air, 1858, 66.
—— on the results obtained from an extended inquiry into the quantity of carbonic acid evolved from the lungs under the influence of various agents, 1858, 142.
—— on the methods hitherto adopted for the determination of the carbonic acid contained in the expired air, with the description of a new method, 1858, 142.
*—— on the sequence in the phenomena observed in man under the influence of alcohol, 1859, 265.
—— on the action of tea and alcohols, 1860, 145.
SMITH (Rev. G. N.) on three undescribed bone-caves near Tenby, 1860, 101.
SMITH (Col. HAMILTON) on the colossal Sepiadæ, 1841, 73.
SMITH (Prof. H. J. S.) on systems of indeterminate linear equations, 1860, 6.
*SMITH (J.) on a new steam-boiler, 1842, 115.
*SMITH (J.) on the relations of a circle inscribed in a square, 1859, 10.
SMITH (JAMES, of Deanston) on a new canal lock, 1840, 210.
—— on a salmon stair, 1840, 136.
SMITH (JAMES, of Jordan Hill) on some fossil trees, 1835, 63.
—— on the changes which have taken place in the levels of Scotland, 1837, 87.

Smith (James, of Jordan Hill), notice of undescribed shells, 1837, 100.
—— on the shells of the newer pleiocene deposits, 1838, 87.
—— on the superficial beds in the neighbourhood of Glasgow, 1840, 94.
*—— on the geology of Madeira, 1840, 118.
—— on the subsidence of the land at Puzzuoli, 1845, 52.
*—— on the conditions under which boulders occur in Scotland, 1852, 61.
*—— on the shelly deposits of the basin of the Clyde, with proofs of change of climate, 1855, 96.
Smith (John, of Perth) on the production of colour and the theory of light, 1859, 22.
—— on the chromoscope, 1860, 65.
Smith (John) on the rubble bridge of Ashiesteel, 1850, 187.
Smith (J. P.) on the superiority of macadamized roads for streets of large towns, 1849, 129.
Smith (R.) on a wreck intelligencer, 1858, 221.
Smith (Dr. R. Angus) on sulphuric acid in the air and water of towns, 1851, 52.
Smith (S.), notice of some balls composed of the hairs of a plant, 1858, 117.
Smith (S.) on the bursting of guns and cannons, 1858, 221.
Smith (Dr. W.) on the variations in the quantity of rain in different parts of the earth, 1838, 27.
*Smith (W.) on improved mechanical means for the extraction of oil, and the economical manufacture of manures from fish and fishy matter, 1856, 164.
Smith (W. H.) on the natural peculiarities and advantages of the mineral field and the proposed harbour of Fair Head, Ireland, 1852, 129.
*Smith (W. L.) on the choice of subject in photography, 1858, 66.
Smyth (Prof. C. P.) on changes in the position of the transit-instrument, attributed to the temperature of the earth, 1847, 37.
*—— on cometary physics, 1850, 31.
*—— account of the Edinburgh observatory, 1850, 31.
—— on a new form of equatorial mounting for the Edinburgh observatory, 1850, 187.
—— on a mode of cooling the air of rooms in tropical climates, 1850, 188.
—— on the application of telescope sights to rifles, 1850, 188.
*—— on a method of applying the power of wind to a pump, for the purpose of irrigation, 1851, 118.
—— on an improved form of reflecting instrument for use at sea, 1852, 12.
—— on the red prominences seen during the total solar eclipse of 1851, 1852, 13.
Smyth (Prof. C. P.) on Penrose and Bennett's sliding helicograph, 1852, 129.
—— on solar refraction, 1855, 29.
—— on altitude-observations at sea, 1855, 29.
—— on the transmission of time-signals, 1855, 29.
—— on naval anemometrical observations, 1855, 45.
—— on the constancy of solar radiation, 1856, 28.
——, notice of the engraving of three views of the Mare Crisium, 1857, 28.
Smyth (Admiral) on the results of measurements of γ Virginis, 1857, 32.
Smythies (J. K.) on the motion of points or atoms subject to any law of force, 1839, 24.
Snow (Capt. W. P.) on practical experience of the law of storms in each quarter of the globe, 1860, 52.
—— on the lost Polar expedition, and the possible recovery of its scientific documents, 1860, 180.
Sollitt (J. D.) on the composition and figuring of the specula of reflecting telescopes, 1853, 10.
—— on the chemical constitution of the Humber deposits, 1853, 49.
—— on the Diatomaceæ found in the neighbourhood of Hull, 1853, 63.
Solly (E.), analysis of American soils on which cotton is grown, 1839, 91.
—— on bleaching vegetable wax, 1840, 86.
——, notice of diseased bark of ash-trees, occasioned by insects, 1842, 65.
—— on gutta percha, a new variety of caoutchouc, 1845, 32.
—— on the influence of galvanic electricity on the germination of seeds, 1845, 69.
*Solomon (J. V.) on squinting, 1841, 80.
*Somers (W.) on a new alga, 1853, 63.
Sopwith (T.) on the mountain-limestone formation in Alston Moor, 1838, 79.
—— on the construction of geological models, 1838, 94.
—— on an improved levelling stave, 1838, 154.
——, description of instruments to facilitate the process of isometrical projection, 1838, 155.
—— on improved writing-cabinets, 1838, 156.
—— on the importance of preserving national mining records, 1838, 156.
Sorby (H. C.) on the tetramorphism of carbon, 1850, 62.
—— on the structure and mutual relationships of the older rocks of the Highland border, 1855, 96.
—— on some of the mechanical structures of limestones, 1855, 97.
—— on the currents produced bythe action of the winds and tides, and the structures

generated in the deposits formed under their influence, by which the physical geography of the seas at various geological epochs may be ascertained, 1855, 97.

Sorby (H. C.), description of a working model to illustrate the formation of "drift bedding," 1856, 77.

—— on the magnesian limestone having been formed by the alteration of an ordinary calcareous deposit, 1856, 77.

—— on the microscopical structure of mica-schist, 1856, 78.

—— on some facts connected with slaty cleavage, 1857, 92.

—— on a new method of determining the temperature and pressure at which various rocks and minerals were formed, 1858, 107.

—— on some peculiarities in the arrangement of the minerals in igneous rocks, 1858, 107.

—— on the currents present during the deposition of the carboniferous and Permian strata in South Yorkshire and North Derbyshire, 1858, 108.

—— on the origin of "cone-in-cone," 1859, 124.

Soret (Louis) on the correlation of dynamic electricity and the other physical forces, 1857, 16.

South (Sir J.) on the satellites of Jupiter, 1831–32, 87.

Southwood (Mr.) on Mr. Whewell's anemometer, 1837, 33.

Sowerby (G. B.) on certain monstrosities of Encrinus moniliformis, 1838, 115.

—— on Lycopodium lepidophyllum, 1838, 119.

Soyres (Rev. F. De) on the educational statistics of Sidlesham, 1837, 140.

*Speke (Captain), discovery of lake Nyanza in Central Africa, 1859, 266.

*—— on the commercial resources of Zanzibar on the east coast of Africa, 1859, 266.

Spence (J.) on the production of sulphurous acid gas from the combustion of coal, 1854, 75.

Spence (P.) on Robertson's patent chain propeller, 1859, 243.

Spencer (T.) on the deposition of metals by voltaic action, 1839, 38.

—— exhibited a cylindrical battery of great intensity in small space, 1839, 39.

—— on the supply and purification of water, 1859, 83.

Spineto (Marquis) on the site of the ancient city of Memphis, 1836, 96.

—— on the results of trials made for water in the desert between Suez and Cairo, 1837, 66.

*—— on the Egyptians and Americans, 1845, 80.

Spittal (Dr.) on the cause of the sounds of respiration, 1838, 122.

Splittgerber (M.) on the manufacture of a coloured glass, 1845, 29.

Spooner (W. C.) on certain principles which obtain in the application of manures, 1846, 44.

Spottiswoode (W.) on the fundamental laws of motion and equilibrium, 1847, 5.

Spratt (Capt.) on a remarkable phenomenon presented by the fossils in the freshwater tertiary strata of the island of Cos, 1845, 59.

—— on the influence of temperature upon the distribution of the fauna in the Ægean Sea, 1848, 81.

*—— on the route between Kustenjeh and the Danube, 1856, 119.

*Sprengel (Dr. H.) on a new form of blowpipe for laboratory use, 1860, 72.

Square (W. J.) on empyema, 1841, 82.

Stainton (H. T.) on the distribution of British butterflies, 1859, 156.

—— on some peculiar forms amongst the micro-lepidopterous larvæ, 1860, 122.

Stanger (Dr. W.) on certain furrows and smoothings in the surface of granite, caused by drift sand, at the Cape of Good Hope, 1852, 61.

Stanley (Capt.) on the lengths and velocities of waves, 1848, 38.

Stanley (Lord), address as President of the Statistical Section, 1856, 122.

Stansfeld (H.) on distinctions between money and capital, interest and discount, currency and circulating medium, essential to be observed in the reform of our monetary laws, 1858, 197.

*Stark (Dr.) on the statistics of small-pox, 1845, 90.

Stark (Dr. James) on the structure and mode of the formation of glaciers, 1842, 58.

Stark (John), return of the number of civil actions and civil and criminal prosecutions and informations in the northern district of Newfoundland during 29 years, 1855, 191.

Statham (Rev. F. F.) on a curious exemplification of instinct in birds, 1853, 71.

—— on the consumption of smoke in furnaces and manufacturing premises, 1853, 127.

—— on railway collisions, with suggestions for their prevention, 1853, 129.

—— on the geology of the Scilly Isles, 1858, 108.

—— on the occurrence of Bombyx mori in a wild state in this country, 1858, 130.

*Statherr (J.) on an improved printing-machine, 1854, 163.

Stein (J.) on a direct method of separating arsenious from arsenic acid, and on its application to the estimation of nitric acid, 1850, 62.

Steinheil (Prof.), notice of his method of making specula by the electrotype, 1842, 16.

STEPHENS (J.), a return from Oct. 2, 1837, to Aug. 2, 1838, of prisoners coming under the cognizance of the police in Newcastle, 1838, 166.
*STEPHENSON (R.) on the accident to the Britannia Bridge, 1849, 111.
STEVELLY (Prof.), attempt to connect the best-known phenomena of meteorology with established physical principles, 1834, 564.
—— on the application of a vernier to a scale, not of equal but of variable parts, 1834, 596.
——, description of a self-registering barometer, 1835, 109.
—— on the doubtful algebraic sign in certain formulæ of algebraic geometry, 1836, 5.
—— on the mathematical rules for constructing compensating pendulums, 1836, 7.
—— on filling a barometer without an air-pump, and procuring an invariable surface in the cistern, 1839, 21.
—— on the projection of a star on the dark limb of the moon, 1845, 5.
—— on the occasional distinct vision of rapidly revolving coloured sectors, 1850, 21.
—— on the limit of weight which may safely be laid on a pile driven into the ground, 1854, 163.
—— on a method of treating the doctrine of parallel lines, 1856, 8.
STEVENSON (R.), his reasons for postponing the report on the waste and extension of the land of the east coast of Britain, and the permanency of the relative level of the sea and land, 1831–32, 582.
STEVENSON (T.) on the force of the waves, 1850, 189.
STEWART (BALFOUR) on certain laws observed in the mutual action of sulphuric acid and water, 1855, 70.
—— on a thermometer for measuring fluctuations of temperature, 1856, 47.
——, experiments on radiant heat, involving an extension of Prévost's theory of exchanges, 1858, 23.
—— on radiant heat, 1859, 23.
*—— on some recent extensions of Prévost's theory of exchanges, 1860, 19.
STOKES (Prof. G. G.) on the aberration of light, 1845, 9.
—— on the resistance of a fluid to two oscillating spheres, 1847, 6.
—— on a difficulty in the theory of light, 1848, 5.
—— on the refraction of light beyond the critical angle, 1848, 5.
—— on the perfect blackness of the centre of Newton's rings, 1848, 7.
—— on the resistance of the air to pendulums, 1848, 7.
—— on a mode of measuring the astigmatism of a defective eye, 1849, 10.
—— on the determination of the wave-length corresponding with any point of the spectrum, 1849, 11.
STOKES (Prof. G. G.) on the mode of disappearance of Newton's rings in passing the angle of total internal reflexion, 1850, 19.
—— on metallic reflexion, 1850, 19.
—— on a fictitious displacement of fringes of interference, 1850, 20.
—— on Haidinger's brushes, 1850, 20.
—— on a new elliptic analyser, 1851, 14.
—— on the optical properties of a recently discovered salt of quinine, 1852, 15.
*—— on the application of certain optical phenomena to chemistry, 1852, 39.
—— on the achromatism of a double object-glass, 1855, 14.
—— on the effect of wind on the intensity of sound, 1857, 22.
*STOKES (Major J.) on the Lower Danube, 1859, 197.
STOKES (Capt. J. L.), survey of the southern part of the middle island of New Zealand, 1851, 97.
STOKES (Dr. W.) on the effects of accumulations of liquids or of air within the cavity of the thorax, 1835, 98.
STONEY (B. B.) on the formation of the entrances to tidal basins, 1857, 198.
STONEY (Prof. G. JOHNSTONE) on a collimator for completing the adjustments of reflecting telescopes, 1856, 30.
——, description of an arrangement of Grove's battery, 1857, 20.
—— on the propagation of waves, 1859, 9.
—— on the nomenclature of metrical measures of length, 1859, 243.
—— on rings seen in viewing a luminous point through fibrous specimens of calc-spar, 1860, 19.
STOTHERD (Lieut.) on a patch of granite in Cavan, 1835, 58.
STOW (D.) on moral training for large towns, 1855, 191.
*STRACHEY (Capt.) on hourly meteorological observations made in Thibet, 1850, 43.
—— on the geology of a part of the Himalaya and Thibet, 1851, 69.
—— on the botanical geography of a part of the Himalaya and Thibet, 1851, 72.
—— on the geography of Kumáon and Garhwál in the Himalaya, 1851, 92.
—— on the inhabitants of Kumáon and Garhwál in the Himalaya, 1851, 94.
—— on the formula for the wet-bulb thermometer, 1852, 31.
STRANG (Dr. J.) on the progress of Glasgow, in population, wealth, manufactures, &c., 1850, 162.
—— on the progress and extent of steamboat building in the Clyde, 1852, 120.
—— on the progress, extent, and value of the coal and iron trade of the west of Scotland, 1855, 193.
—— on the progress, extent, and value of

the porcelain, earthenware, and glass manufacture of Glasgow, 1856, 153.
STRANG (Dr. J.) on the money-rate of wages of labour in Glasgow and the west of Scotland, 1856, 155.
—— on the rise, progress, and value of the embroidered muslin manufacture of Scotland and Ireland, 1857, 167.
—— on the advantages arising from the improvement of tidal rivers as exemplified by the state of the Clyde, 1857, 167.
—— on the water-supply to great towns, its extent, cost, uses, and abuses, 1858, 198.
—— on the sewing-machine in Glasgow, and its effects on production, prices, and wages, 1858, 198.
—— on church-building in Glasgow, 1859, 223.
STRANGWAYS (Hon. F.) on the natural peculiarities of the mountain called the Louisenberg, in a letter to Sir R. I. Murchison, 1846, 91.
STRICKLAND (A.) on a species of Procellaria new to the British fauna, 1831–32, 598.
—— on the Ardea alba, 1838, 106.
*—— on a species of Scyllium taken on the Yorkshire coast, 1838, 107.
—— on the British wild geese, 1858, 131.
STRICKLAND (Prof. H. E.) on the nature and origin of transported gravel in England, 1837, 61.
——, queries respecting the gravel near Birmingham, 1839, 71.
—— on the true method of discovering the natural system in zoology and botany, 1840, 128.
—— on the genus Cardinia, Agassiz, as characteristic of the lias formation, 1841, 65.
——, notice of a map of Santorin, 1841, 68.
—— on Halcyon smyrnensis, 1842, 70.
—— on a chart of the natural affinities of the Insessorial order of birds, 1843, 69.
—— on the structure and affinities of Upupa, Linn., and Irrisor, Lesson, 1843, 70.
——, notice of the Prince of Canino's work, 'Fauna Italica,' 1843, 70.
——, notice of Capt. Drummond's catalogues of birds of Corfu, the Ionian Islands, and of Crete, 1843, 70.
*—— on an anomalous structure in the paddle of an Ichthyosaurus, 1844, 51.
—— on the footprints of animals on the new red sandstone of Corncockle Muir, 1845, 51.
—— on results of researches into the fossil insects of the Secondary formations of Britain, 1845, 58.
—— on the history of the Dodo and other allied species of birds, 1847, 79.
* —— on anastatic printing and its various combinations, 1848, 120.
—— on vegetable remains in the Keuper sandstone of Longdon, Worcestershire, 1849, 66.
STRICKLAND (Prof. H. E.) on two additional bones of the long-legged Dodo, or Solitaire, brought from Mauritius, 1849, 81.
—— on a peculiar structure in the submedial pair of rectrices of Vidua paradisea, 1850, 126.
—— on pseudomorphous crystals in new red sandstone, 1853, 61.
—— on the Partridges of the great watershed of India, 1853, 71.
—— on the mode of growth of Halichondria suberea, 1853, 72.
*STRUTHERS (Dr. J.) on the use of the round ligament of the head of the femur, 1855, 135.
—— on the use of the round ligament of the hip-joint, 1855, 136.
—— on the explanation of the crossed influence of the brain, 1855, 136.
STRUVE (Prof.) on the importance of accurately connecting the observatories of Russia and of Greenwich, 1847, 46.
STRUVÉ (W. P.) on the great anticlinal line of the mineral basin of South Wales, 1848, 75.
—— on the ventilation of collieries, with description of a new mine-ventilator, 1848, 120.
—— on a new low-pressure atmospheric railway, 1848, 120.
STUART (J.) on the sculptured stones of Scotland, 1859, 197.
STUART (W.) on the Plymouth breakwater, 1841, 99.
STURGEON (W.) on electro-magnetism, 1831–32, 569.
—— on a peculiar class of voltaic phenomena, 1840, 86.
STURM (Prof.) on a method of manufacturing cylindrical lenses, 1854, 47.
STURT (Capt. C.) on an Australian expedition, 1854, 125.
—— on discoveries in Australia, 1856, 119.
STUTCHBURY (S.) on an additional species of saurian found near Bristol, 1836, 90.
—— on a large cylindrical bone found in the "bone-bed" of Aust Cliff, on the Severn, 1849, 67.
SULLIVAN (Mr.) on the tribes of Indians inhabiting the country explored by the British North-American expedition, 1860, 173.
SULLIVAN (Prof. W. K.) on a process for the determination of the nitrates in plants, 1857, 58.
—— on the presence of several acids of the series $C^n H^n O^4$ among the products of the distillation of peat, 1857, 58.
—— on the solubility of salts at high temperatures, and on the action of saline solutions on silicates under the influence of heat and pressure, 1857, 59.
*—— on the influence which physical characteristics exert upon the language and mythology of a people, as a means of tracing the affinities of races, 1857, 153.

SULLIVAN (Prof. W. K.) on some double salts formed with bichromate of potash, 1858, 66.
SUNDEVALL (Prof. C. J.) on the muscles of the extremities of birds, 1855, 137.
SUSINI (Señor) on the Amazon and Atlantic water-courses of South America, 1855, 155.
*SUTHERLAND (Dr.) on glaciers in the Arctic regions, 1854, 126.
SUTHERLAND (K. L.), observations on Vancouver Island, 1857, 153.
SUTTON (T.) on a new photographic lens which gives images entirely free from distortion, 1859, 63.
SVANBERG (Prof. A. F.) on a new multiplying condenser, 1846, 31.
SWAN (W.) on the limits to the velocity of lighthouse revolving apparatus, 1850, 191.
SYKES (Col.) on mean temperatures in India, 1834, 567.
—— on the measurement of heights by common thermometers, 1835, 25, 26.
—— on the geographical range of birds, 1835, 69.
—— on wages in India, 1835, 118.
*—— on education in the Deccan, 1835, 125.
*——, statistics of Australia, 1835, 125.
—— on the fruits of the Deccan, 1836, 106.
—— on the utility of cooperating committees of trade and agriculture for investigating the natural and artificial products of India, 1836, 149.
——, proceedings of the Meteorological Committee, 1837, 37.
—— on a rare animal from South America, 1838, 104.
—— on the statistics of vitality in Cadiz, 1838, 174.
—— on certain meteorological phenomena in the Ghâts of Western India, 1839, 15.
——, extract of a letter from Capt. Aston on a shower of grain, 1840, 44.
—— on the meteorology of the province of Coorg, in the western Ghâts of India, 1842, 22.
—— on the mortality of Calcutta, 1844, 88.
—— on the statistics of Frankfort-on-the-Maine, 1844, 88.
—— on the statistics of hospitals for the insane in Bengal, 1844, 89.
—— on the fall of rain on the coast of Travancore and table-land of Uttree, from observations of General Cullen, 1846, 22; 1848, 39.
——, statistics of civil justice in India, 1846, 94.
——, statistics of the criminal courts of India, 1846, 95.
——, statistics of the Government charitable dispensaries of India, 1846, 96.
—— on barometrical levellings in the Madras Presidency, 1847, 42.
——, prices of the cerealia and other edibles of India and England compared, 1847, 107.
SYKES (Col.), revenue statistics of the Agra Government, or north-west provinces of Bengal, 1847, 109.
—— on atmospheric disturbances, and on a remarkable storm at Bombay, 1848, 41.
——, remarks on the Dutch possessions in the East, 1848, 112.
——, statistics of civil justice in Bengal in which the Government is a party, 1848, 116.
——, contributions to the statistics of sugar produced in India, 1849, 108.
——, statistical account of the labouring population inhabiting the Metropolitan Society's buildings at St. Pancras, 1849, 108.
—— on Indian hail-storms, 1850, 43.
——, statistics of criminal and civil justice under the Bombay Government, 1850, 159.
——, note on Mr. Pyle's meteorological observations at Futtegurh, Bengal, 1851, 40.
—— on the possessions of the Imaum of Muscat, and on the climate of Zanzibar, with observations on the prospects of African discovery, 1852, 113.
—— on the census and condition of the island of Bombay, 1852, 120.
—— on the meteorology of Nice Maritime, 1854, 34.
——, statistics of Nice Maritime, 1854, 145.
—— on the establishment of a meteorological and magnetical observatory at Travancore by Mr. Broun, 1858, 30.
—— on the desirableness of renewing balloon-ascents in England for meteorological objects, 1858, 39.
——, introductory address as President of the Statistical Section, 1859, 200.
—— on the past, present, and prospective financial condition of British India, 1859, 223.
SYLVESTER (Prof. J. J.) on the relation of Sturm's auxiliary functions to the roots of an algebraic equation, 1841, 23.
—— on the double square representation of prime and composite numbers, 1844, 2.
—— on the expressions for the quotients which appear in the application of Sturm's method to the discovery of the real roots of an equation, 1853, 1.
—— on a generalization of Poncelet's theorems for the linear representation of quadratic radicals, 1860, 7.
SYM (Dr.) on the mechanical functions of the ear, 1840, 154.
SYME (Prof.) on excision of diseased joints, 1834, 684.
SYMONDS (Rev. W. S.), notice of some fossil remains of fishes from the old red sandstone of Herefordshire and the carboniferous limestone of Tortworth, 1854, 95.

SYMONDS (Rev. W. S.) on a phyllopod crustacean in the upper Ludlow rock of Ludlow, 1855, 98.
*—— on some phenomena in the Malvern district, 1856, 78.
*—— on the rocks of Dean Forest, 1856, 78.
—— on a fossil of the Severn drift, 1857, 93.
—— on a new species of Eurypterus from the old red sandstone of Herefordshire, 1857, 93.
—— on some fishes and tracks from the passage rocks and from the old red sandstone of Herefordshire, 1859, 124.
—— on the fish-rain at Aberdare in Glamorganshire, 1859, 158.
—— on drift pebbles found in the stomach of a cow, 1859, 158.
—— on the selection of a peculiar geological habitat by some of the rarer British plants, 1860, 102.
SYMONS (G. J.) on a new standard portable mountain-barometer, 1858, 39.
*—— on thunder-storms, 1859, 54.
——, results of an investigation into the phenomena of English thunder-storms, 1860, 52.
*SYMONS (J.) on phenomena discovered in the moon, 1856, 31.
*SYMONS (J. C.) on criminal statistics, 1857, 168.
SYMONS (W.) on a new electrical battery, 1854, 75.
—— on a new form of the gas battery, 1855, 15.
—— on a modification of the Maynooth cast-iron battery, 1856, 16.
SYNGE (Major) on the most rapid communication with India, *vid* British North America, 1852, 114.
*—— on rapid communication between the Atlantic and the Pacific, *vid.* British North America, 1859, 200.
*—— on the proposed communication between the Atlantic and Pacific, *vid* British North America, 1860, 181.

TALBOT (H. F.), account of researches in the integral calculus, 1836, 1.
—— on Daguerre's photogenic process, 1839, 3.
—— on the improvement of the telescope, 1842, 16.
—— on photography, 1844, 105.
—— on a new principle of crystallization, 1847, 58.
TAMNAU (Dr. F.) on some rare mineralogical specimens, 1843, 38.
—— on newly-discovered three-twin crystals of harmotome, 1843, 38.
TANKERVILLE (Earl of), account of the wild cattle of Chillingham Park, 1838, 100.
TARTT (W. M.) on some statistics bearing upon the relations existing between poverty and crime, 1856, 159.
TARTT (W. M.) on the criminal statistics of this and certain foreign countries, 1857, 168.
—— on subjects connected with crime and punishment, 1858, 199.
TATE (T.) on the density of steam at various temperatures, 1859, 233.
TAYLER (A.) on the true action of what are called heat-diffusers, 1859, 244.
TAYLOR (F.), Goliathus giganteus, and the jaws of a shark, exhibited by, 1837, 100.
*TAYLOR (H.) on the chemical composition of the rocks of the coal formation, 1850, 63.
TAYLOR (J.) on the Arctic flora, 1859, 140.
—— on Falco islandicus and F. groenlandicus, 1859, 158.
TAYLOR (JOHN) on the collection and arrangement of vein-stones, and importance of an accurate examination of their connexion with the rocks in which they occur, 1831–32, 585.
—— on the action of hot water upon glass, and Dr. Wollaston's suggested experiment for measuring the corroding power by steam under pressure upon glass, 1831–32, 592.
—— on the depths of mines, 1833, 427.
—— on the duty of steam-engines in Cornwall, 1835, 108.
—— on the comparative value of the mineral productions of Great Britain and the rest of Europe, 1836, 144.
—— on the duty of the Cornish engines, 1837, 133.
——, notice of the Dutch Commissioners' visit to Cornwall to ascertain the duty done by the Cornish engines, with the experiments made, 1840, 197.
*—— on the water-power at Wheal Friendship mine, 1841, 106.
——, notice of the immense steam-engine for draining the lake of Haarlem, 1843, 100.
——, notice of A. Rous's steam-engine indicator, 1843, 101.
——, notice of Mr. Cooke's clock movement and new mode of suspending the pendulum, 1843, 101.
—— on an iron floating graving dock, 1854, 163.
TAYLOR (Dr. J.) on tropical hurricanes, 1852, 31.
—— on waterspouts, 1855, 45.
TAYLOR (Mr.), notice of a new kind of drawing paper, 1842, 114.
TAYLOR (Capt.) on a floating breakwater, 1841, 100.
—— on a shield to protect the paddle-wheels of steam-boats from the action of the sea, 1841, 101.
TAYLOR (Admiral) on means to lessen the loss of life round our coasts; also a permanent deep-water harbour of refuge by artificial bars, 1860, 215.
*TAYLOR (Dr.) on combustion in furnaces and prevention of smoke, 1855, 209.

TAYLOR (T. L.) on the sounds emitted by mollusca, 1848, 82.
TAYLOR (Rev. W.) on coal-gas, 1831–32, 88.
——, specimens of ornamental turning exhibited by, 1831–32, 610.
——, description of Mr. Littledale's apparatus by which the blind can write and read, 1844, 99.
TAYLOR (Dr. W. C.), report of the University of New York, 1837, 139.
—— on the Irish silk manufacture, 1843, 89.
—— on the pauper lunatics of Ireland, 1843, 90.
*TCHIHATCHEFF (PIERRE DE), travels in Asia Minor, 1851, 95.
*—— on the geographical distribution of plants in Asia Minor, 1860, 181.
TEALE (T. P.) on Alcyonella stagnorum, 1836, 104.
—— on the gemmiferous bodies and vermiform filaments of Actiniæ, 1838, 113.
—— on the superficial deposits of the valley of the Aire at Leeds, 1858, 111.
TEGETMEIER (W. B.) on the formation of the cells of bees, 1858, 132.
TENNENT (A.), statistics of a Glasgow grammar-school class of 115 boys, 1855, 192.
*TENNENT (Prof. J.) on pseudomorphous crystals from volcanic districts of India, 1848, 61.
—— on the Koh-i-noor diamond, 1852, 39; 1854, 75; 1860, 87.
*—— on descriptive labels for mineral collections in public institutions, 1857, 57.
——, notes on gold nuggets from Australia, 1859, 85.
THIBERT (Dr.), notice of his method of modelling and colouring after nature all kinds of fishes, 1846, 80.
THOM (Mr.) on a water filter, 1840, 206.
—— on an improved rain-gauge, 1840, 210.
THOMAS (Mr.) on abnormal tides, 1843, 19.
THOMAS (R.) on thin films of decomposed glass found near Oxford, 1860, 19.
THOMPSON (Dr. THEOPHILUS) on the value of opium as a remedy in rheumatism, and on the circumstances which should regulate its employment, 1841, 78.
THOMPSON (W.), results of deep dredging of the Mull of Galloway, by Capt. Beechey, 1842, 72.
—— on the alpine hare of Scotland and Ireland, 1843, 68.
——, notice of a specimen of the Pycnonotus chrysorrhæus shot near Waterford, 1843, 71.
—— on the nidification of the woodcock in Ireland, 1843, 71.
——, some additions to the fauna of Ireland, 1843, 73; 1844, 66; 1846, 83; 1847, 80; 1848, 125.
——, a comparison of the rain at Florence Court, Enniskillen, with that at Belfast during the same period, 1844, 14.
THOMPSON (W.) on the crania of two species of crocodile from Sierra Leone, 1846, 79.
—— on the land mollusca, zoophytes, an algæ of the Isle of Wight, 1846, 83.
——, zoology of Lough Neagh, compared with that of the Lake of Geneva, 1846, 84.
——, notice of phanerogamous and cryptogamous plants collected by D. Murray in the co. Cork, 1843, 79.
——, additions to the flora of Ireland, 1846, 90.
——, comparison of the periods of the flowering of plants in the Botanic Garden, Belfast, and the Jardin des Plantes at Paris, 1846, 90.
*THOMPSON (WM.), photographs of objects of natural history, exhibited by, 1856, 105.
——, results of a day's dredging in Weymouth Bay, 1857, 108.
THOMSON (Rev. Dr.) on meteorology considered chiefly in relation to agriculture, 1849, 33.
THOMSON (Dr. ALLEN), remarks on some specimens of reptiles, 1834, 623.
—— on the structure of the gastro-intestinal mucous membrane and of the gastric and intestinal glands, 1840, 149.
—— on the formation and structure of the spermatozoa in Ascaris mystax, 1855, 138.
—— on the brain of the Troglodytes niger, 1855, 139.
——, contributions to the history of fecundation in different animals, 1855, 139.
THOMSON (Dr. A. T.) on the poisonous properties of the salts of lead, 1831–32, 604.
—— on the medicinal and poisonous properties of the iodides, 1838, 123.
—— on a pustular disease undescribed by writers on diseases of the skin, 1841, 77.
*—— on the influence of the endermic application of the salts of morphia in painful permanent swelling of the joints, 1844, 86.
THOMSON (C.), tables to simplify the method of finding the time by observing circumpolar stars in the same vertical, 1857, 25.
THOMSON (Dr. D. P.) on an extraordinary mirage, 1847, 39.
*THOMSON (JAMES) on Wigston's self-acting railway signals, 1842, 114.
THOMSON (Prof. J.) on an improved modification of the ink-reservoir in gold pens, 1851, 118.
—— on a jet-pump, or apparatus for drawing up water, 1852, 130.
—— on some properties of whirling fluids, with their application in improving the action of blowing fans, centrifugal pumps, and certain kinds of turbines, 1852, 130.
—— on an experimental apparatus constructed to determine the efficiency of the

jet-pump, and a series of results obtained, 1853, 130.
THOMSON (Prof. J.) on certain curious motions observable on the surfaces of wine and other alcoholic liquors, 1855, 16.
—— on the friction break dynamometer, 1855, 209.
—— on a centrifugal pump and windmill erected for drainage and irrigation in Jamaica, 1855, 210.
—— on an india-rubber valve for drainage of low lands into tidal outfalls, 1855, 210.
*—— on the measurement of running water by weir-boards, 1855, 211.
—— on the grand currents of atmospheric circulation, 1857, 38.
—— on the plasticity of ice, 1857, 39.
—— on recent theories and experiments on ice at its melting-point, 1859, 23.
THOMSON (Dr. R. D.) on the chemistry of the digestive organs, 1836, 117.
—— on Mr. Farr's law of recovery and mortality in cholera, 1838, 126.
—— on nitrate of silver as a caustic and therapeutic agent, 1838, 132.
—— on the existence of free muriatic acid in the stomach during digestion, 1839, 58.
—— on alkaline indigestion, 1839, 107.
—— on the tests for sulphuric acid when thrown on the person, 1840, 84.
—— on opacity of the cornea produced by sulphuric acid, 1840, 164.
—— on the production of hydrocyanic acid for medical use, 1841, 54.
—— on the composition of crystallized diabetic sugar, 1841, 54.
—— on an important chemical law in the nutrition of animals, 1846, 41.
—— on the condition of the atmosphere during cholera, 1855, 71.
THOMSON (Prof. T.) on the combinations of sulphuric acid and water, 1836, 56.
—— on the specific heats of nitric acid and alcohol, 1837, 43.
—— on the foreign substances in iron, 1838, 41.
—— on the sugar in urine of diabetes, 1838, 43.
—— on native diarseniate of lead, 1838, 46.
—— on galactin, 1838, 46.
—— on emulsin, 1838, 48.
—— on chemical manufactures carried on in and near Glasgow, 1840, 58.
—— on the minerals in the neighbourhood of Glasgow, 1840, 64.
THOMSON (Dr. T.) on the botanical geography of western Thibet, 1851, 73.
——, notice of two living specimens of the lepidosiren from Macartney Island, 1841, 72.
*THOMSON (Dr. T. R. H.) on some aboriginal tribes of New Holland, 1851, 95.
THOMSON (Dr. W.) on the infiltration of the lungs with black matter, and on black expectoration, 1834, 683.
THOMSON (W.) on the dentition of the British pulmoniferous mollusca, 1850, 126.
THOMSON (Prof. W.) on the elementary laws of statical electricity, 1845, 11.
—— on electrical images, 1847, 6.
—— on the electric currents by which the phenomena of terrestrial magnetism may be produced, 1847, 38.
—— on the equilibrium of magnetic or diamagnetic bodies of any form, under the influence of the terrestrial magnetic force, 1848, 8.
—— on the theory of electro-magnetic induction, 1848, 9.
—— on the theory of magnetic induction in crystalline substances, 1850, 23.
*—— on the thermal effects of air rushing through small apertures, 1852, 16.
—— on the sources of heat generated by the galvanic battery, 1852, 16.
—— on the mutual attraction between two electrified spherical conductors, 1852, 17.
—— on certain magnetic curves, with applications to problems in the theories of heat, electricity, and fluid motion, 1852, 18.
—— on the equilibrium of elongated masses of ferromagnetic substance in uniform and varied fields of force, 1852, 18.
——, experimental researches in thermo-electricity, 1854, 13.
—— on mechanical antecedents of motion, heat, and light, 1854, 59.
—— on the effects of mechanical strain on the thermo-electric qualities of metals, 1855, 17.
—— on the use of observations of terrestrial temperature for the investigation of absolute dates in geology, 1855, 18.
—— on the electric qualities of magnetized iron, 1855, 19.
—— on the thermo-electric position of aluminium, 1855, 20.
—— on peristaltic induction of electric currents in submarine telegraph wires, 1855, 21.
—— on new instruments for measuring electrical potentials and capacities, 1855, 22.
—— on Dellman's method of observing atmospheric electricity, 1856, 17.
—— on Mr. Whitehouse's relay and induction coils in action on short circuit, 1857, 21.
—— on the effects of induction in long submarine lines of telegraph, 1857, 21.
*—— on machinery for laying submarine telegraph cables, 1857, 199.
—— on electrical "frequency," 1859, 26.
—— on the discharge of a coiled electric cable, 1859, 26.
—— on the necessity for incessant recording, and for simultaneous observations in different localities, to investigate atmospheric electricity, 1859, 27.

THOMSON (Prof. W.) on the reduction of periodical variations of underground temperature, with applications to the Edinburgh observations, 1859, 54.
—— on atmospheric electricity, 1860, 53.
THOMSON (Prof. WYVILLE T. C.) on the application of photography to the compound microscope, 1850, 126.
—— on the character of the Sertularian zoophytes, 1852, 78.
—— on some Ayrshire fossils, 1853, 61.
*—— on the fauna of the lower Silurians of the south of Scotland, 1855, 99.
*—— on the reproductive zooids of Comatula rosacea, 1857, 108.
*THORNTON (E.), ascent of Orizaba in Mexico, 1851, 98.
*THORNTON (J.) on the friction of discs in water, and on the experiments to be made on centrifugal pumps, 1854, 163.
THOST (C. G.) on the rocks and minerals in the property of the Marquis of Breadalbane, 1859, 125.
*THRELKELD (Rev. J.) on the condition of the natives of Australia, 1857, 154.
*THUDICHUM (Dr.) on thiotherine, 1860, 72.
—— on the physiological relations of the colouring matter of the bile, 1860, 147.
*THURNAM (Dr.) on the scientific craniosccopy of Prof. Carus, 1844, 86.
—— on the relative liability of the two sexes to insanity, 1844, 92.
—— on the liability to insanity at different ages, 1845, 87.
——, notice of a case of spina bifida, 1845, 86.
THURNELL (G.) on a mode of constructing the rectangular hyperbola by points, 1858, 5.
THWAITES (G. H. K.) on conjugation in the Diatomaceæ, 1847, 87.
—— on an apparently undescribed state of the Palmelleæ, with observations on gemmation in the lower tribes of plants, 1848, 87.
*TICKELL (Capt.) on surveys in Arracan, 1853, 92.
TILLEY (Prof. T.) on a peculiar condition of zinc, 1844, 35.
—— on the oil of assafœtida, 1845, 33.
TILT (Dr. E. J.) on the causes which advance or retard the appearance of first menstruation in woman, with a synoptical table showing the mean age of first menstruation in hot, temperate, and cold climates, 1850, 135.
—— on ascertaining the number and condition of the infantile idiots in the United Kingdom, 1851, 109.
TOORN (A. VAN DER), table of the proportions of anhydrous acid in acetic acid of every degree of concentration, compared with the specific gravities, 1834, 571.
*TOPP (A.) on models of fire-escapes, boat-lowering apparatus, &c., 1855, 244.
TORBOCK (R.) on uterine hæmorrhage and mode of arresting it, 1838, 133.
TOWLER (G. V.) on the cause of magnetism, 1846, 33; 1859, 28.
TOWNSEND (Mr.), notes on the Australians, 1851, 95.
TOWNSEND (R. W.) on the minerals of Cork, 1843, 38.
—— on an instrument for exhibiting the colours of liquids by transmitted light, 1852, 20.
—— on refracted lines of cleavage seen in the slate-rocks of Ballyrizora in the co. of Cork, 1853, 61.
TOWSON (J. T.) on the inefficiency of the aids of science in connexion with the compasses of iron ships, 1854, 55.
*—— on modifications of great-circle sailing, 1854, 126.
*—— on the means proposed by the Liverpool Compass Committee for carrying out investigations relative to the laws which govern the deviation of the compass, 1855, 22.
—— on changes of deviation of the compass on board iron ships by "heeling," with experiments on board the City of Baltimore, Aphrodite, Simla, and Slieve Donard, 1859, 28.
TRAILL (Dr. J. S.) on the laryngeal sac of the reindeer, 1834, 623.
—— on the geological structure of the Orkney Islands, 1834, 644.
—— on the geology of Spain, 1835, 61; 1837, 70.
—— on the aurora borealis, 1836, 32.
*——, notice of fossil fishes from the Caithness schist of Pomona (Orkneys) and from Clashbennie, 1836, 95.
—— on an antimonial compound applicable as a pigment, 1837, 58.
——, notice of Argas Persicus, a species of bug, 1837, 98.
TRAILL (Dr. W. S.), experiments on the intensity of terrestrial magnetism at Liverpool and Manchester, 1831-32, 559.
TRAIN (G. F.) on street railways as used in the United States, 1860, 215.
TREVELYAN (W. C.) on the phænogamous plants of the Färoe Islands, 1834, 598.
—— on an undescribed fossil wood (Penuce Ferroensis) from Färoe, 1834, 666.
*—— exhibited a living specimen of the Coluber natrix of Italian authors, also Polyodon folium of North America, a collection of Neapolitan insects, and an Urtica gathered in the island of Elba, 1838, 116.
—— on the discovery of guano in the Färoe Islands, 1845, 64.
TRIMMER (J.) on diluvial drift containing shells and remains of animals in Cefn Cave, 1838, 86.
TRIPE (Dr.) on some specimens of Pontia, 1841, 72.

TRISTRAM (Rev. H. B.) on the geological system of the central Sahara of Algeria, 1860, 102.
TROLLOPE (Rev. E.) on the fens and submarine forests of Lincolnshire and other localities, 1858, 113.
TROYON (M.) on the lacustrine homes of the ancient Swiss, 1858, 154.
*TRYPE (Dr.) on preparations obtained from the decomposition of Cannel coal and the Torbane Hill coal, 1855, 99.
TURNBULL (Dr. J.) on the physiological properties of some of the compounds of the organic radicals—methyle, ethyle, and amyle, 1854, 76.
TURNER (J. A.) on a new species of Goliathus and some Lucani from the coast of Africa, 1838, 113.
*TURNER (Mr.), notice of fossil fish from Antigua, 1845, 56.
TURNER (Dr. E.) on atomic weights, 1831–32, 576; 1833, 399.
TUTSCHEK (Dr. L.) on the researches of the late C. Tutschek into the Galla, Tumali, and other African languages, 1847, 126.
—— on a vocabulary of the Fazoglo language, 1847, 126.
—— on the Tumali language, 1848, 100.
—— on the Fazoglo language, 1848, 100.
TWAMLEY (C.) on a singular fault in the southern termination of the Warwickshire coal-field, 1853, 62.
TWEEDY (Mr.), notice of nearly pure bismuth found in a mine near Truro, 1841, 58.
TWINING (H. R.) on teaching perspective by models, 1849, 33.
—— on some of the appearances which are peculiar to sunbeams, 1851, 35.
—— on an instrument for drawing, 1852, 32.
*—— on some peculiarities of granite in certain points of the Pyrenees, 1852, 62.
—— on a method of teaching perspective, 1856, 9.
—— on the angular measurement of the picture in painting, 1859, 64.
TWINING (Miss) on the comparison of the flora of Britain with that of other countries, 1847, 87.
TWINING (Dr. W.) on cretinism, 1845, 79.
—— on the Nekrasowzers of Bessarabia, 1846, 115.
*—— on the Buriats and Tungusians, 1847, 127.
*—— on the Aleutian islanders, 1847, 127.
*TYNDALL (Prof. J.) on the magneto-optical properties of crystals, 1850, 23.
—— on diamagnetism and magnecrystallic action, 1851, 15.
——, experiment in thermo-electricity with the monothermic pile invented by Prof. Magnus of Berlin, 1851, 18.
—— on air-bubbles formed in water, 1851, 26.
—— on molecular action, 1852, 20.
TYNDALL (Prof. J.) on Poisson's theoretic anticipation of magnecrystallic action, 1852, 20.
—— on the diamagnetic force, 1854, 14.
—— on some peculiarities of the magnetic field, 1854, 16.
—— on the demonstration of the polarity of diamagnetic bodies, 1855, 22.
—— on an ascent of Mont Blanc, 1858, 39.
—— on the establishment of thermometric stations on Mont Blanc, 1859, 56.

ULRICH (J. G.) on improvements in chronometers, and on applying very fine wire of gold or platinum for astronomical or other purposes, 1847, 42.
URE (A.) on the operation for squinting, 1840, 163.
URE (Dr.) on the thermostat, or heat-governor, 1833, 419.
—— on photometry, 1839, 7.
—— on a new calorimeter, 1839, 20.
—— on the fluency or viscidity of liquids, at the same and different temperatures, 1839, 22.
——, experiments on fermentation, 1839, 59.
*—— on the evaporative calorific powers of fuel, 1839, 132.
*URE (J. F.) on the navigation of the Clyde, 1855, 211.
URQUHART (Mr.) on the plague in Constantinople, 1837, 139.

VALENTINE (J.) on illegitimacy in Aberdeen and the other large towns of Scotland, 1859, 224.
—— on the statistics, chiefly vital and economic, of Aberdeen, 1859, 226.
VALLINI (Dr.) on a skeleton of Mastodon angustidens found near Montopoli, 1852, 62.
*VALMERINO (Count DU) on gas-lighting, 1839, 65.
VALPY (R.) on the trade and navigation of Norway, 1845, 87.
—— on the mines and mining industry of Belgium, 1846, 100.
—— on the resources of the Irish Sea fisheries, 1847, 110.
——, progress and direction of British exports, and the influence thereon of free trade and gold, 1854, 145.
——, effect of the war in Russia and England upon the principal articles of Russian produce, 1855, 195.
*——, review of the operations in the Bank of England, 1858, 201.
—— on the British trade with India, 1859, 227.
VANDALEUR (Mr.), results of a scheme for improving the condition of labourers, tried at Ralahine, co. Clare, Ireland, 1847, 98.
VAN DER HOEVEN (Prof.) on the structure of Nautilus pompilius, 1847, 77.

VAN DER HOEVEN (Prof.) on the genus Perodicticus of Bennett, and its relation to Stenops, 1850, 125.
—— on the anatomy of Stenops Potto, 1860, 134.
—— on the Teredo navalis, 1860, 136.
*VAN DE VELDE (Chevalier), explorations in Syria and Palestine, 1852, 114.
*VANDEY (Consul) on the Upper Nile, 1852, 114.
VARLEY and CLARKE (Messrs.) on the elastic malleable iron tube, as a means of developing the principle of atmospheric propulsion on railways, 1847, 132.
VARLEY (C.) on a graphic telescope, 1853, 10.
—— on natural occurrences that impair the vision of good telescopes, 1854, 48.
VARLEY (C. F.) on improvements in submarine and subterranean telegraph communications, 1854, 17.
—— on some of the methods adopted for ascertaining the locality and nature of defects in telegraphic conductors, 1859, 252.
VARRENTRAPP (Dr.) on determining the amount of nitrogen in organic bodies, 1841, 53.
—— and Prof. REDTENBACHER on the constitution and products of the distillation of fat bodies, 1840, 76.
VAUGHAN (D.) on meteoric astronomy, 1854, 26.
——, secular variations in lunar and terrestrial motion from the influence of tidal action, 1857, 40.
—— on the light of suns, meteors, and temporary stars, 1857, 42.
—— on the effects of the earth's rotation on atmospheric movements, 1859, 41.
—— on the growth of trees in continental and insular climates, 1859, 140.
VELASQUEZ DE LEON (Lt.-Col.) on the government-map of Mexico, 1838, 98.
VERDET (M.) on the dispersion of the planes of polarization of the coloured rays produced by the action of magnetism, 1860, 54.
VERICOUR (M. RAYMOND DE), ethnological outlines of France, 1847, 127.
VERLOREN (Dr.) on the effect of temperature and periodicity on the development of certain Lepidoptera, 1860, 123.
VERNEUIL (E. DE), Sir R. I. Murchison on the geological structure of Spain, to explain an outline general map of the Peninsula by, 1850, 108.
*—— on the geological structure of Spain, 1852, 62.
VERSCHOYLE (Archdeacon) on the trap dykes of Mayo and Sligo, 1835, 59.
VERSMANN (F.) on the comparative value of certain salts for rendering fibrous substances non-inflammable, 1859, 86.
VICARY (Major) on the geology of a portion of the Himalaya mountains, 1852, 62.
VIGNOLES (Archdeacon) on bog timber, 1835, 76.
*VIGNOLES (C.) on the construction of railroads, 1835, 108.
*—— on percussion boring of tunnels, 1839, 131.
—— on the economy of railways in respect of gradients, 1840, 193.
—— on timber bridges, in special reference to railways, 1840, 195.
——, abstract of a lecture upon the atmospheric railway, 1842, 100.
—— on straight axles for locomotives, 1842, 104.
—— on the best form of rails and the upper works of railways generally, 1842, 106.
—— on the use of béton and concrete in constructing breakwaters, 1842, 112.
——, notice of M. Bergeron's method of instantaneously casting loose the locomotive engine, 1842, 114.
VIVIAN (E.) on the phenomena of Kent's Cavern, 1847, 73.
—— on printing photographs, with suggestions for introducing clouds and artistic effects, 1856, 18.
—— on the climate of Torquay and South Devon, 1856, 48.
——, researches in Kent's Cavern, Torquay, with the original MS. memoir of its first opening, 1856, 78.
—— on the earliest traces of human remains in Kent's Cavern, 1856, 119.
——, results of his new self-registering hygrometers, 1860, 55.
VOELCKER (Dr. A.) on the composition of the ash of Armeria maritima, grown in different localities, and remarks on the geographical distribution of that plant, and the presence of fluorine in plants, 1849, 43.
—— on the proportion of phosphoric acid in some natural waters, 1850, 63.
—— on the percentage of nitrogen as an index to the nutritive value of food, 1850, 64.
—— on the effects of salt on vegetation, 1850, 114.
—— on caseine, and a method of determining sulphur and phosphorus in organic compounds in one operation, 1855, 73.
*—— on the composition of American phosphate of lime, 1856, 58.
*—— on the corrosive action of smoke on building-stones, 1856, 58.
*—— on basic phosphates of lime, 1856, 58.
—— on the composition of Norwegian apatite, 1857, 59.
—— on the proportion of organic phosphorus in legumine, 1857, 60.
—— on the methods of analysing the superphosphates, 1857, 60.
—— on the constitution of the mineral portion of bones, and the analysis of

common bone-ash, animal charcoal, &c., 1858, 68.
*Voelcker (Dr. A.) on combinations of earthy phosphates with alkalies, 1859, 88.
—— on poisonous metals in cheese, 1860, 73.
Vogel (Dr.), description of the Ajuh, a kind of whale, found in the river Benué (Central Africa), 1856, 98.

Wailes (Mr.) exhibited the two sexes of the Psalidognathus Friendii, 1838, 113.
Walenn (W. H.) on a form of galvanic battery, 1849, 45.
—— on M. Pulvermacher's patent portable hydro-electric chain battery, 1851, 52.
Walker (C. V.) on the voltaic reduction of alloys, 1845, 30.
—— on telegraphic time signals, 1852, 131.
—— on graphite batteries, 1852, 132.
*Walker (H.) on the results of free trade, 1858, 201.
Walker (J.) on the muscles and nerves of the eyeball, 1836, 121.
Walker (J. J.) on the iris seen on the surface of water, 1859, 29.
*Walker (Rev. Prof.), report of anemometrical observations at Oxford during two years, 1847, 46.
—— on the pendulum experiment of Foucault, 1851, 19.
Walker (W.) on the geological changes produced by the Saxicava rugosa in Plymouth Sound, 1841, 66.
—— on oceanic waves, 1842, 21.
*Wallace (Mr.) on an inoculation in two trees, 1838, 120.
*Wallace (Mr.) on a smoke-protector, 1840, 208.
—— on extinguishing fire in steam-vessels, 1840, 194.
Wallace (Clay), Sir D. Brewster on some preparations of the eye by, 1838, 14.
Wallace (Dr. W.) on the properties of the catenary and curves of equilibration, 1840, 190.
*—— on the carbonates of alumina, chromic oxide, and ferric oxide, 1858, 69.
—— on chloro-arsenious acid and some of its compounds, 1858, 69.
—— on the equivalent of bromine, 1859, 88.
—— on improvements in the manufacture of kelp, 1859, 88.
*—— on the causes of fire in Turkey-red stoves, 1860, 73.
Waller (Dr. A.) on impaired vision in which objects appear much smaller than natural, 1848, 82.
—— on the luminous spectra excited by pressure on the retina, and their application to the diagnosis of the affections of the retina and its appendages, 1848, 82.
Waller (Dr. A.), microscopic observations on the movement of the human blood in the capillaries, and on the structure of the nerves in the glands at the inferior surface of the tongue, 1848, 83.
——, experimental researches on the eye, 1856, 100.
Walmsley (Mr.) on the state of crime in Liverpool, 1837, 139.
*Walsh (Mr.) on a mode of solving cubic equations, 1840, 55.
Walsh (Prof. R. H.) on the condition of the labouring population of Jamaica, as connected with the present state of landed property in that district, 1855, 197.
——, the price of silver of late years does not afford an accurate measure of the value of gold, 1855, 198.
——, a deduction from the statistics of crime, 1856, 159.
—— on the export of silver to the East, 1856, 161.
—— on equitable villages in America, 1857, 170.
Waltershausen (Baron von) on the physico-geographical description of Mount Etna, 1845, 59.
Ward (Capt.) on the application of the voltaic battery to the ignition of gunpowder, 1854, 18.
Ward (C.) on a flute of a new construction, 1843, 23.
Ward (N. B.) on vivaria, 1855, 117.
—— on suburban gardens, 1858, 117.
—— on some practical results derivable from the study of botany, 1858, 118.
—— on aquaria, 1858, 132.
Ward (Dr. O.) on the footprints and ripple-marks of the new red sandstone of Grinshill Hill, Shropshire, 1839, 75.
Ward (W. Sykes) on crystallization under extreme pressure, 1847, 60.
—— on a new galvanometer, 1847, 60.
—— on an apparatus for giving light under water in diving operations, 1847, 132.
*—— on the electromotive force, dynamic effect and resistance of various voltaic combinations, 1848, 62.
—— on motions exhibited by metals under the influence of magnetic and diamagnetic forces, 1849, 46.
—— on a theory of induced electric currents, suggested by diamagnetic phenomena, 1849, 46.
—— on the comparative cost of working various voltaic arrangements, 1849, 47.
—— on a method of supplying the boilers of steam-engines with water, 1849, 132.
—— on a gas stove, 1850, 191.
—— on the production of cold by mechanical means, 1852, 131.
—— on an electric semaphore for use on railways, 1853, 131.

WARD (W. SYKES) on albuminized collodion, 1856, 58.
—— on the preservation of albuminized collodion plates, 1857, 61.
*—— on dry-collodion processes, 1858, 71.
WARINGTON (R.) on guano, 1844, 32.
—— on preserving the balance between vegetable and animal organisms in sea-water, 1853, 72.
—— on the production of boracic acid and ammonia by volcanic action, 1854, 76.
*—— on the effect of coloured media on the growth of red Algæ, 1854, 77.
—— on the influence of coloured glass on the growth of plants in sea-water, 1854, 103.
——, observations made in small aquaria, in which the balance between the animal and vegetable organisms was permanently maintained, 1854, 115.
—— on the habits of the stickleback, and on the effects of an excess or want of heat and light on the marine aquarium, 1855, 117.
—— on the source of ammonia in volcanic emanation, 1858, 71.
—— on the multiplication of Actiniæ in aquaria, 1858, 133.
—— on some additions to his portable microscope, 1858, 143.
WARREN (Dr.) on some crania found in the ancient mounds in North America, 1837, 108.
WARTMANN (Prof. E.) on Daltonism, 1841, 40.
—— on some meteorological phenomena, 1846, 11.
——, experiments on electro-magnetism, 1846, 27.
—— on some physical properties of the solid and liquid constituent parts of plants, 1851, 19.
WARWICK (Dr.) on a powerful temporary magnet, 1831–32, 85.
WASHINGTON (Capt.), account of a Mandingo, native of Nyáni-Marú, Western Africa, 1838, 97.
—— on expeditions to the Antarctic seas, 1838, 97.
*——, account of the various Government surveys in Europe, 1838, 98.
WATERHOUSE (G. R.) on the classification of the Mammalia, 1843, 65.
WATERHOUSE (J.) on an instrument for maintaining a water-bath at constant temperatures, 1858, 71.
WATERSTON (J. J.) on a general theory of gases, 1851, 6.
—— on the gradient of density in saturated vapours, and its development as a physical relation between bodies of definite chemical constitution, 1852, 2.
—— on the density of saturated vapours and their liquids at the point of transition, 1853, 11.
—— on a law of mutual dependence between temperature and mechanical force, 1853, 11.
WATERSTON (J. J.) on a method of computing the absolute volume of the ultimate particles of liquids, 1854, 63.
WATSON (B. L.) on telegraphic communication on railways, 1837, 131.
WATSON (H. H.) on the use of Leslie's hygrometer with a new scale, 1834, 569.
—— on the quantity of carbonic acid in the atmosphere, 1834, 583.
——, experiments on the phosphate and pyrophosphate of soda, 1836, 48.
WATSON (Rev. J.) on the Helm wind of Crossfell, 1838, 33.
*WATT (Mr.), magnetic instrument to take positions corresponding to the direction of the wind, 1838, 38.
WATT (Mr.) on the vital statistics of Edinburgh and Glasgow, 1840, 173.
WATT (Dr. A.) on the iron trade in Scotland, 1845, 90.
WATTS (J. K.), notice of aurora borealis, 1851, 41.
——, notice of a snow-storm, 1851, 41.
——, account of a lunar rainbow, 1851, 41.
*——, auroræ boreales observed at St. Ives, Huntingdonshire, 1852, 32; 1854, 47.
—— on the geology of St. Ives and its neighbourhood, 1852, 63.
—— on parhelia observed at St. Ives, 1853, 33.
WAY (Prof. J. T.) on the analysis of the ashes of plants, 1845, 34.
—— on the fairy-rings of pastures, 1846, 43.
*—— on the inorganic constituents of root crops, 1847, 60.
*WEATHERED (Hon. J.) on superheated steam, 1857, 199.
—— on combined steam, 1858, 222.
WEBB (T. W.) on lunar volcanos, 1838, 93.
WEBSTER (T.) on the new patent law, 1852, 132.
*WEBSTER (W. H.) on the rise and fall of the barometer, 1851, 42.
WEDGWOOD (H.) on the premises of geometry, 1845, 2.
WELD (Rev. A.), results of ten years' meteorological observations at Stonyhurst, 1860, 56.
WELLS (T. S.) on a case of Purpura hæmorrhagica, 1845, 85.
—— on the climate of the valley of the Nile, 1850, 45.
WELSH (J.) on a sliding-rule for converting the observed readings of the horizontal and vertical force magnetometers into variations of magnetic dip and total force, 1851, 20.
——, description of a sliding-rule for hygrometrical calculations, 1851, 42.
—— on the graduation of standard thermometers at the Kew observatory, 1853, 34.

WELSH (J.), description of a self-registering anemometer by R. Beckley, 1856, 38.
——, description of Stewart's thermometer for measuring fluctuations of temperature, 1856, 47.
——, instructions for the graduation of boiling-point thermometers, intended for the measurement of heights, 1856, 49.
*WENHAM (F.) on the application of photography to the delineation of microscopic objects, 1854, 116.
WERNE (F.) on the sources of the White Nile, 1848, 78.
WERNER (M.) and C. W. SIEMENS, outline of the principles and practice involved in dealing with the electrical conditions of submarine electric telegraphs, 1860, 32.
—— —— on a mode of covering wires with india-rubber, 1860, 215.
WEST (Dr.) on the geographical position of Cape Farewell, 1835, 66.
—— on the formation of wood, 1835, 75.
WEST (T.) on the occurrence of sclerotic plates in fishes, 1844, 63.
WEST (TUFFEN) on the epidermal cells of the petals of plants, 1858, 119.
WEST (W.) on means of detecting gases present in air, 1836, 77.
—— on the ventilation of tunnels, 1837, 136.
—— on some new salts of mercury, 1838, 72.
——, experiments on heating by steam, 1844, 35.
*—— on the mineral springs and other waters of Yorkshire, 1844, 105.
—— on the use of stating, with the results of analyses, the nature of the methods employed, 1846, 42.
—— on the presence of nitrogen in mineral waters, 1849, 47.
WESTWOOD (J. O.) on an undescribed modification of the respiratory organs of certain Crustacea, 1831–32, 603.
—— on the transformations of the Crustacea, 1834, 608.
——; remarks on entomology, 1845, 64.
—— on certain blind species of insects, 1847, 81.
—— on mummy beetles, 1860, 123.
—— on a lepidopterous parasite on the body of the Fulgora candelaria, 1860, 124.
WETTERSTEDT (Baron C.) on the preservation of metals and metallic combinations from oxidation, decomposition, and injury from marine deposits and incrustations, 1847, 60.
WHARTON (W. L.) on a barometer with an enlarged scale, 1833, 414.
—— on a steam-engine for pumping water, 1833, 421.
——, statistical tables of the engines, ventilation, screens, sales, pitmen, &c., and the strata of nine collieries in Durham, 1838, 169.
*——, report for making inquiries into the statistics of the mining districts of Northumberland, Durham, and Yorkshire, 1839, 120.
WHATELY (Archbishop), introductory address to the Statistical Section, 1857, 154.
WHEATSTONE (Prof.) on Dr. Purkinje's experiment on the eye, 1831–32, 551.
—— on an experimental proof of Bernoulli's theory of wind instruments, 1831–32, 559.
—— on the acoustical figures of vibrating surfaces, 1831–32, 558.
—— on the prismatic decomposition of electrical light, 1835, 11.
—— on the imitation of the human speech, 1835, 14.
—— on binocular vision, and the stereoscope, 1838, 16.
—— on a new meteorological instrument, 1842, 9.
—— on a singular effect of the juxtaposition of certain colours under particular circumstances, 1844, 10.
—— on a means of determining the apparent solar time by the diurnal changes of the plane of polarization at the north pole of the sky, 1848, 10.
—— on Prof. Quetelet's investigations relating to the electricity of the atmosphere, 1849, 11.
WHERLAND (Dr.) on a rare case of midwifery, 1843, 84.
WHEWELL (Rev. Dr. W.), suggestions respecting Sir J. Herschel's remarks on the theory of the absorption of light by coloured media, 1834, 550.
—— on the progress of observations of the tides, 1835, 6.
—— on a new anemometer, 1835, 29; further account of, 1836, 39.
—— on the application of physical science to geology, 1835, 65.
—— on the tides, 1836, 130; 1837, 4.
—— on the principle of his anemometer, 1837, 32.
——, report of Committee on the relative levels of land and sea, 1837, 59.
—— on some tide-observations forwarded to him by the Russian Admiral Lütke, 1839, 11.
——, observations on Capt. Fitz Roy's views of the tides, 1839, 11.
—— on Dr. Wollaston's argument respecting the infinite divisibility of matter, 1839, 26.
——, Capt. Hewett's experimental trial on the rise and fall of the tide in the middle of the North Sea, in reference to his theory of the same, 1841, 32.
—— on measuring the height of clouds, 1846, 15.
—— on our ignorance of the tides, 1851, 27.
*——, mathematical exposition of some doctrines of political economy, 1851, 110.

WHEWELL (Rev. Dr. W.) on Bache's tide observations, 1854, 28.
*—— on the reasons for describing the moon's motion as a motion about her axis, 1856, 31.
——, address as President of the Mathematical and Physical Section, 1858, 1.
WHINCOPP (Mr.), notice of a collection of bones and teeth of mammalia and fishes, &c., found in the Crag of Suffolk, presented by, 1850, 192.
WHISHAW (F.), method of exhibiting the results of a given geological survey, 1845, 56.
*—— on the chemical composition of gutta percha, 1848, 62.
—— on the application of gutta percha to the arts and manufactures, 1848, 122.
—— on the patent multitubular pipes and panergous joints, 1848, 123.
—— on the "uniformity of time" and other telegraphs, 1848, 123.
—— on the subaqueous rope for telegraphic and other purposes, 1848, 123.
—— on the improved velocentimeter, 1848, 124.
—— on the telekouphonon, or speaking telegraph, 1848, 125.
—— on chain pipes for subaqueous telegraphs, 1849, 132.
—— on electro-telegraphic communication in England, Prussia, and America, 1849, 133.
WHITBY (Mrs.) on the cultivation of the silkworm, 1844, 73.
—— on the cultivation of silk in England, 1846, 87.
—— on the growth of silk in England, 1849, 81.
WHITE (G.), notice of Starkey's system of filtration by sponge, 1843, 101.
WHITEAVES (J. F.) on the invertebrate fauna of the lower oolites of Oxfordshire, 1860, 104.
WHITEHOUSE (WILDMAN), experimental observations on an electric cable, 1855, 23.
—— on an instrument for determining the value of intermittent or alternating electric currents for purposes of practical telegraphy, 1856, 19.
—— on the law of the squares—is it applicable or not to the transmission of signals in submarine circuits?, 1856, 21.
*—— on the submarine telegraph, 1858, 25.
*WHITNEY (ASA) on the best means of realizing a rapid intercourse between Europe and Asia, 1851, 95.
—— on the formation of a railway from the Atlantic to the Pacific ocean, through the British possessions of North America, 1858, 154.
WHITTY (Prof.) on the Silurian anthracite of Cavan, 1854, 95.
WHITWORTH (C. F.) on improvements in railway signals, 1858, 223.
WHITWORTH (J.) on producing true planes or surfaces on metals, 1840, 192.
*——, notice of a die-stock for cutting screws, 1841, 106.
—— on an instrument for measuring bodies to a very minute degree of accuracy, 1844, 27.
*——, new machine for ascertaining the diameter of metallic cylinders, 1844, 98.
WHYTLAW (M.) on a new method of scutching the New Zealand flax, 1852, 132.
WIDDRINGTON (Capt.) on the habits of the eel, and on the freshwater fish of Austria, 1841, 71.
—— on some species of European pines, 1841, 76.
—— on the arboreal vegetation of Spain, 1847, 88.
—— on the oaks to be found in the Italian peninsula, 1847, 89.
*—— on a supposed new species of Felis, 1854, 113.
WIGGLESWORTH (Mr.) on the mortality of children, 1846, 100.
WIGHAM (J. B.) on the sandpipes in the chalk near Norwich, 1839, 65.
WILDE (Mr.) on the preparation of fish, 1839, 84.
WILDE (W. A.), statistics of the deaf and dumb in Ireland, 1852, 121.
*—— on the early bills of mortality at Dublin, 1852, 121.
*WILDE (W. R.) exhibited drawings of a Peruvian mummy, 1839, 82.
WILL (Dr.) on determining the amount of nitrogen in organic bodies, 1841, 53.
—— on an improved method of ascertaining the commercial value of alkalies or carbonated alkalies, acids, and oxides of manganese, 1843, 37.
WILLCOX (C.) on the naturalization in England of the Mytilus crenatus, 1833, 448.
WILLIAMS (Mr.) on preventing the dangers of collision, and of fire in vessels, 1837, 133.
*WILLIAMS (Archdeacon) on the Gael, Breton, and Cymry, 1848, 101.
*WILLIAMS (C.) on the desirableness of extending to the working classes the opportunity of purchasing deferred annuities, as a provision for old age, 1848, 105.
*—— on deferred annuities, 1857, 172.
WILLIAMS (C. GREVILLE) on some of the basic constituents of coal-naphtha, 1855, 74.
—— on the new maximum thermometer of Negretti and Zambra, 1855, 24.
WILLIAMS (Dr. C. J. B.) on the phenomena and products of a low form of combustion, 1834, 588.
—— on an improved ear-trumpet, 1836, 36.
—— on the construction and application

of instruments used in auscultation, 1842, 75.
WILLIAMS (Dr. C. J. B.) on the therapeutic application of air-tight fabrics, 1842, 77.
WILLIAMS (C. WYE) on the combustion of coal, and prevention of smoke in furnaces, 1840, 199.
*—— on the advantages and disadvantages of hot air in effecting the combustion of coal, 1842, 40.
—— on testing the efficacy of the several plans for abating the nuisances from smoke, 1842, 108.
WILLIAMS (Dr. D.) on Limax variegatus in the human intestines, 1837, 98.
—— on two specimens of Tænia, 1844, 85.
WILLIAMS (Rev. D.) on some fossil plants from Devonshire and Pembrokeshire, 1835, 63.
—— on some fossil wood and plants discovered low down in the grauwacke of Devon, 1837, 94.
—— on the geological horizon of the rocks of South Devon and Cornwall, 1839, 68.
—— on the older strata of Devonshire, 1840, 103.
—— on the stratified and unstratified volcanic products in the neighbourhood of Plymouth, 1841, 61.
—— on the stratified and unstratified volcanic products of the West of England, 1842, 54.
—— on the discovery of the remains of fishes at the base of the mountain limestone in the vicinity of Bristol, 1842, 60.
—— on the granite and other volcanic rocks of Lundy Island, 1843, 57.
—— on the Exeter amygdaloid, 1844, 55.
—— on the geology of Lundy Island, 1848, 79.
—— on an original broad sheet of granite, interstratified among slates with grit beds, between Falmouth and Truro, 1849, 68.
*WILLIAMS (Rev. J.), a perfect specimen of Ichthyosaurus tenuirostris from the lias of Somersetshire exhibited by, 1831–32, 587.
WILLIAMS (J.) on the Treffos pump, 1837, 129.
WILLIAMS (Rev. R.) on local and hereditary difference of complexion in Great Britain, with notice of the Cimbri, 1845, 81.
*WILLIAMS (R. P.) on an instrument for setting out curve lines, 1858, 223.
WILLIAMS (Dr. T.) on the structure and functions of the branchial organs of the Annelida and Crustacea, 1848, 83.
—— on the physical conditions regulating the vertical distribution of animals in the atmosphere and the sea, 1848, 83.
—— on the structure of the branchiæ and mechanism of breathing in the Pholades and other lamellibranchiate mollusks, 1851, 82.
—— on the mechanism of respiration in the family of Echinidæ, 1856, 101.
WILLIAMS (Dr. T.) on the fluid system of the Nematoid entozoa, 1856, 101.
WILLIAMSON (Prof. A. W.), results of a research on etherification, 1850, 65.
—— on the constitution of salts, 1851, 54.
WILLIAMSON (W. C.) on the coal-measures of West Lancashire, 1837, 81.
—— on the origin of coal, 1842, 48.
*—— on Polystomella crispa and the classification of Foraminifera, 1848, 125.
—— on the restoration of Zamites gigas from the lower sandstone and shale of the Yorkshire coast, 1854, 103.
—— on the British species of Foraminifera, 1854, 113.
*WILLICH (C. M.) on a formula for ascertaining the expectation of life, 1857, 172.
—— on annuities on lives, 1857, 172.
*—— on a mode of constructing tables of squares and cubes, 1858, 6.
—— on the angles of dock-gates and the cells of bees, 1859, 10.
WILLIS (Prof.) on the teeth of wheels, 1837, 135.
—— on the odontograph, 1838, 154.
——, notice of Mr. Hawthorn's method of working the valves of a locomotive engine, 1838, 160.
*WILSON (Mr.) on the population of Scotland, 1840, 186.
WILSON (Mr.) on lithotomy and lithotripsy, 1842, 87.
*WILSON (A. S.) on a system of moving bodies, 1859, 43.
WILSON (Capt. F.) on a new wheelbarrow, 1853, 132.
*WILSON (Prof.) on the tribes between India and China, 1847, 127.
WILSON (D.) on the evidence of the existence of primitive races in Scotland prior to the Celtæ, 1850, 142–146.
*WILSON (Dr. D.) on the supposed unity of the American race, 1857, 154.
WILSON (D. H.) on the church- and chapel-room in All Saints' parish, Newcastle, 1838, 166.
WILSON (Prof.), description of De Colmar's arithmometer or calculating machine, 1854, 1.
——, description of Babinet's homalographic maps, 1854, 2.
WILSON (Dr. G.), demonstration of the existence of haloid salts in solution, 1839, 41.
—— on the extent to which fluoride of calcium is soluble in water at 60° F., 1846, 38; 1850, 68.
—— on the presence of fluorine in the waters of the Firth of Forth, the Firth of Clyde, and the German Ocean, 1849, 47.
—— on the influence of sunlight over the action of the dry gases on organic colours, 1850, 65.
—— on the presence of fluorine in blood and milk, 1850, 67.
——, a few unpublished particulars concerning the late Dr. Black, 1850, 69.

WILSON (Dr. G.) on the artificial preparation of sea-water for marine vivaria, 1854, 77.
—— on the processes for the detection of fluorine, 1857, 61.
—— on the employment of the living electric fishes as medical shock-machines, 1857, 115.
——, notice of Mr. Napier's process of etching glass in relief by hydrofluoric acid, 1859, 88.
—— on some of the stages which led to the invention of the modern air-pump, 1859, 89.
—— on the employment of the electrical eel, Gymnotus electricus, as a medical shock-machine, by the natives of Surinam, 1859, 158.
—— on the statistics of colour-blindness, 1859, 228.
WILSON (G. F.) on a process for obtaining and purifying glycerine, and on some of its applications, 1855, 75.
WILSON (G. S.) on an Australian expedition, 1854, 125.
WILSON (J.) on the coleopterous insects of Sutherland, 1834, 615.
—— on the salmon fry, 1840, 133.
—— on some Persian insects, 1840, 136.
WILSON (J. M.) on statistics of crime in Ireland, 1857, 171.
WILSON (J. S.) on the physical geography of N.W. Australia, 1858, 155.
—— on the general and gradual desiccation of the earth and atmosphere, 1858, 155.
WILSON (T.), account of the Darton Collieries' Club, 1838, 173.
WITHAM (H.) on fossil plants, 1831–32, 78.
—— on fossil vegetation, 1831–32, 583.
WITHAM (H. T. M.) on rolled stones found in the coal seam of Cockfield Fell Colliery, 1838, 79.
WOLLASTON's (Dr.) argument respecting the infinite divisibility of matter, Rev. W. Whewell's remarks on, 1839, 26.
WOLLEY (J.) on the birds of the Faroë islands, 1850, 127.
—— on a fresh form of crystallization in the particles of fallen snow under intense cold, 1858, 40.
*—— on the arrangement of small stones on certain bare levels in northern localities, 1858, 224.
WOOD (Mr.) on Kosman's patent cistern as a sanitary machine, 1849, 134.
*WOOD (Dr.) on the economical uses of certain lichens growing in abundance about Cork, 1843, 79.
WOOD (Dr. A.) on the laws regulating the development of monstrosities, 1850, 138.
WOOD (E.) on the genus Woodocrinus, 1857, 76.
*WOOD (E. A.) on a mode of suspending, disconnecting, and hoisting boats attached to sailing ships and steamers at sea, 1859, 245.
WOOD (N.) on the red sandstone of the Tweed and Carlisle, 1838, 78.
WOOD (SEARLES V.) on the discovery of an alligator in the freshwater cliff at Hordwell, with extinct mammalia, 1844, 50.
*—— on some tubular cavities in the coralline crag at Sudbourne and Gedgrave in Suffolk, 1851, 70.
—— on the probable maximum depth of the ocean, 1855, 99.
*WOOD (Dr. T.) on the combination of metals with oxygen, 1852, 40.
*WOODALL (Capt.) on barometrical and thermometrical observations at Scarborough, 1856, 49.
—— on the evidence of a reef of lower lias rock, extending from Robin Hood's Bay to the neighbourhood of Flamborough Head, 1856, 80.
*—— on the intermittent springs of the chalk and oolite of the neighbourhood of Scarborough, 1860, 108.
*WOODHOUSE (J.) on the mould for casting conical bullets, 1852, 132.
WOODS (Dr. T.) on the electrolysotype, a new photographic process, 1844, 36.
—— on chemical combination; and on the amount of heat produced by the combination of several metals with oxygen, 1852, 39.
—— on the time required by compounds for decomposition, 1857, 61.
WOOLLCOMBE (H.) on the statistics of Plymouth, Stonehouse, and Devonport, 1841, 82.
—— on the statistics of Plymouth, 1842, 98.
WOOLLGAR (J. W.) on the financial economy of savings'-banks, 1844, 92.
WORSLEY (P. J.) on a new process for making and melting steel, 1856, 59.
WREDE's (Von) explanation of the absorption of light, Prof. Powell on, 1837, 16.
WRIGHT (Dr. E. PERCIVAL), notes of a visit to Mitchelstown caves, 1857, 108.
—— on Tomopteris onisciformis, 1860, 124.
*WRIGHT (H.) on the use of the gramme in chemistry, 1856, 60.
*WRIGHT (T.) on the early ethnology of Britain, 1854, 130.
—— on some remains of an early people in the south-eastern corner of Yorkshire, 1854, 130.
*—— on the ethnology of England at the extinction of the Roman government in the island, 1855, 146.
*—— on inscriptions in unknown characters on Roman pottery discovered in England, 1855, 146.
—— on the opening of a sepulchral tumulus in East Yorkshire, 1858, 156.
*—— on the excavations on the site of the Roman city of Uriconium at Wroxeter, 1860, 181.
WRIGHT (Dr. THOMAS) on the occurrence of the upper lias ammonites in the (so-called)

basement beds of the inferior oolite, 1856, 80.
WRIGHT (Dr. THOMAS) on the Avicula contorta beds and lower lias in the south of England, 1860, 108.
WRIGHTSON (Dr. F.) on the sewerage of manufacturing towns, 1854, 77.
WRIGHTSON (F. C.) on the ashes of narcotic plants, 1845, 36.
——, analytical investigations of cast iron, 1849, 49.
*WYLDE (W. R.) on the topography of ancient Tyre, 1839, 71.
*WYLLIE (J.) on some old red sandstone fossils, 1859, 126.
WYLSON (J.) on the scantlometer, 1844, 99.
WYNNE (A. B.) on the geology of the Galty mountains, Ireland, 1857, 93.
—— on the tertiary clay and lignite of Ballymacadam, near Caher, co. Tipperary, 1857, 94.

YARRELL (W.) on the reproduction of the eel, 1833, 446.
—— on a new species of smelt (Osmerus Hebridicus), 1838, 108.
YATES (J.) on fossil vegetables from the new red sandstone of Worcestershire, 1837, 59.
—— on the footsteps of extinct animals, observed in a quarry in Rathbone-street, Liverpool, 1840, 99.
*——, notice of specimens of Zamia gigas from Runswick near Whitby, 1846, 62.
—— on Stangeria paradoxa, 1854, 104.
—— on a method of substituting francs and centimes for the present English metallic currency, 1854, 146.
——, notice of a fossil cone, probably from the greensand formation, and a stem of a fossil cycad, 1857, 95.
—— on the application of the decimal scale in the construction of maps, 1857, 172.
—— on the use of prime numbers in English measures, weights, and coinage, 1857, 174.
YATES (J.), notice of cycadaceous plants grown in England, 1859, 142.
YATES (J. B.) on the rapid changes which take place at the entrance of the river Mersey, 1839, 77.
*—— on the estuary of the river Mersey, and the hazardous and uncertain approaches to the port of Liverpool, 1854, 126.
YEATS (Dr. J.) on our national strength, as tested by the number, the ages, and the industrial qualifications of the people, 1855, 199.
*YELLOLY (Dr.) on spade husbandry in Norfolk, 1836, 150.
—— on spade husbandry, 1837, 139.
—— on an improved acoustic instrument, 1838, 129.
YOUNG (Mr.), notice of a work on the geology of Nova Scotia by Dr. Gesner, 1837, 75.
YOUNG (Rev. Dr.) on the antiquity of organic remains, 1838, 95.
*YOUNG (Rev. N.), infected leaves of the potato from the neighbourhood of Oxford, 1847, 89.
YOUNG (Prof.) on diverging infinite series, 1844, 1.
—— on a principle in the theory of probabilities, 1844, 1.
—— on imaginary zeros, &c., 1845, 1.
—— on the principle of continuity in reference to certain results of analysis, 1846, 1.
YOUNG (R.) on the inhabitants of Lower Bengal, 1851, 95.
YOUNG (R.) on the Eskers of the central part of Ireland, 1852, 63.

ZAGLAS (M.) on the morphology of the muscular system, 1850, 138.
ZANDER (M.) on the potato disease, 1846, 89.
*ZORNLIN (Miss R.) on heat, and on the indestructibility of elementary bodies, 1858, 6.

SECTIONS.

INDEX OF SUBJECTS.

Abacus, chemical, Dr. D. B. Reid's notice of a, 1839, 65.
Abdomen, Sir D. J. H. Dickson on enormous hydropic distension of the, 1842, 83.
Abdominal viscera, Dr. R. M'Donnell on the valvular apparatus connected with the vascular system of certain, 1857, 115.
Abel's argument respecting equations of the fifth degree, Sir W. R. Hamilton's exposition of, 1837, 1.
Abies and Pinus, Capt. Cook on the genera, 1838, 117.
Abrothallus, Dr. W. L. Lindsay on the genus, 1856, 88.
Abscess of the lungs, Dr. Barnes on, 1838, 134.
——, hepatic, Sir D. J. H. Dickson on cases of, 1841, 81.
Absorption, Dr. Carson on, 1836, 119.
——, Dr. Handyside on the office of lacteals, lymphatics, and veins in the function of, 1835, 92.
—— of light by coloured media, Sir J. F. W. Herschel on, 1833, 373.
Acalepha, notice of a new species of, named Apolemia Gettiana, 1843, 76.
Acalephæ, R. Patterson on the, 1840, 142.
——, British, Prof. E. Forbes on the, 1846, 84.
——, J. Price on the quasi-osseous system of the, 1846, 87.
——, Prof. J. H. Corbett on the, with respect to organs of circulation and respiration, 1856, 91.
——, hydrostatic, Prof. T. H. Huxley on the anatomy of the, 1851, 78.
Acanthodes antiquus, new species, from the lower old red sandstone, 1859, 116.
—— Mitchelli, a new species of ichthyolite, 1860, 77.
Acari, Prof. Allman on the structure of the larva of certain, 1847, 74.
—— in mica, Sir D. Brewster on the existence of, 1855, 9.
Acarus that attacks grasses, J. Hardy on an, 1850, 124.
Accadian language, Rev. Dr. E. Hincks on the, 1860, 156.
—— language, Rev. Dr. E. Hincks on the relation between the, and the Indo-European, Semitic, and Egyptian languages, 1857, 134.
Acetates, J. Mercer on the solvent power of solutions of, 1844, 32.
Acetic acid, table of the proportions of anhydrous acid in, by A. van der Toorn, 1834, 571.
—— acid, Prof. T. Thomson on its manufacture at Glasgow, 1840, 62.
—— and nitric acids, Dr. J. H. Gladstone on a method of analysis applicable to the quantitative estimation of, 1854, 68.
Achatina turrita, 1837, 100.
Achromatic combinations, double, A. Claudet on a changing diaphragm for, 1859, 62.
—— microscope, A. Pritchard's, 1835, 112.
—— object-glasses, D. Dick on the construction of, 1834, 593.
Achromatism of the eye, Rev. Prof. Powell on the, 1833, 374; 1834, 548.
—— of a double object-glass, Prof. Stokes on the, 1855, 14.
Acid, acetic, 1834, 571; 1840, 62; 1854, 68.
——, anhydrous, table of the proportions of, in acetic acid, by A. van der Toorn, 1834, 571.
——, arsenious, J. Stein on a method of separating arsenic acid from, 1850, 62.
——, arsenious and sulphuric, Dr. Schafhaeutl on a new compound of, 1840, 69.
——, boracic, Mr. R. Warington on its production by volcanic action, 1854, 76.
——, butyro-limnodic, 1852, 35.
——, carbonic, its non-production by plants, 1837, 58.
——, carbonic, quantity of, in the atmosphere, 1834, 583.
——, carbonic, thrown off from the lungs, 1840, 87.
——, carbonic, R. Addams on an apparatus for solidifying, 1838, 70.
——, carbonic, absorption of, by sulphuric acid, 1848, 61.
——, chloro-arsenious, and some of its compounds, 1858, 69.
——, chromic, pure, Dr. Dalzell on the economical preparation of, 1859, 68.

Acid, citric, tartaric, and oxalic, their action on cotton and flax fibres, 1854, 65.
——, cyanic, new form of, 1855, 64.
——, fat, Dr. Playfair on a new, 1840, 76.
——, gallic, J. Horsley on the conversion of tannin into, 1856, 52.
——, gallic and tannic, their action on iron and alumina mordants, 1854, 65.
——, gambodic, Prof. Johnston on the resin of, 1838, 60.
——, gambogic, and the gambogiates, Dr. Scoffern on their use in artistic painting, 1851, 51.
——, humic, 1840, 83.
——, hydrobromic and hydriodic, Dr. Glover's process for preparing, 1840, 75.
——, hydrochloric and nitric, presence of lead in, 1854, 72.
——, hydrocyanic, A. Gages on its comparative action on albumen and caseine, 1859, 162.
——, hydrocyanic, 1835, 45.
——, hydrocyanic, for medical use, production of, 1841, 54.
——, kakodylic, Prof. Bunsen on, 1842, 35.
——, kakodylic, 1840, 77.
——, lampic, nature of, 1846, 40.
——, margaric, 1840, 76.
——, muriatic, 1835, 45.
——, nitric, Dr. G. Bird on the products obtained by the action of, on alcohol, 1838, 55.
——, nitric, its action on naphtha, 1844, 33.
——, nitric, its action on the chlorates, iodates, and bromates of potassa and soda, 1840, 79.
——, nitric, in rain-water, 1854, 70.
——, nitric, production of, 1846, 38.
——, nitric, method for the quantitative estimation of, 1858, 64.
——, nitric, process for the estimation of, 1850, 62.
——, nitric and acetic, Dr. Gladstone on a method of analysis applicable to the quantitative estimation of, 1854, 68.
——, nitric, and alcohol, specific heats of, 1837, 43.
——, oxalic, action of, upon the dead tissues of the animal body, 1846, 41.
——, permanganic, Prof. Schönbein on a peculiar formation of, 1847, 57.
——, phosphoric, in rocks, indirect method of ascertaining the presence of, by Prof. Daubeny, 1855, 55.
——, phosphoric, in some natural waters, Dr. Voelcker on the proportion of, 1850, 63.
——, spiroilous and saliculous, identity of, 1840, 78.
——, sulpho-methylic, 1835, 42.
——, sulphuric, tests for, when thrown on the person, 1840, 84.
——, sulphuric, in the air and water of towns, Dr. R. A. Smith on, 1851, 52.
Acid, sulphuric, concentrated, J. S. Brazier on its action on cubebin in relation to the test for strychnine, 1859, 256.
——, sulphuric, and water, Dr. T. Thomson on the combinations of, 1836, 56.
——, sulphuric, and water, B. Stewart on certain laws observed in the mutual action of, 1855, 70.
——, sulphurous, its production from the combustion of coal, 1854, 75.
——, ulmic, 1840, 83.
——, uric, products of the decomposition of, 1837, 38.
——, uric, pre-existence of urea in, 1840, 73.
——, valerianic, supposed formation of, from indigo, 1844, 33.
——, Dr. Will on an improved method of ascertaining the commercial value of, 1843, 37.
—— of the series $C^n H^n O^4$, Prof. Sullivan on the presence of several, among the products of the distillation of peat, 1857, 58.
——, carbazotic, physiological properties of, 1854, 65.
——, fat, Prof. Redtenbacher and Dr. Varrentrapp on the constitution and products of the distillation of, 1840, 76.
Acidaspis, fossil, Silurian, J. W. Salter on, 1852, 60; A. Jamesii, new species, 60.
Acidulated waters, Rev. Dr. Buckland on their action on the chalk near Gravesend, 1839, 76.
Aconite, E. R. Harvey on the mode of death by, 1860, 133.
Acoustic instrument, Dr. Yelloly on an improved, 1838, 129.
—— phenomenon, singular, 1857, 22.
Acoustical figures of vibrating surfaces, 1831–32, 558.
Acrodus nobilis (an extinct genus), Prof. Owen on the teeth of, 1838, 138.
Acteon viridis, Prof. Allman on the anatomy of, 1844, 65.
Actinia chrysanthellum, Mr. C. W. Peach on, 1846, 86.
—— equina, J. G. Dalyell on the propagation of, 1834, 599.
Actiniadæ, Prof. Forbes on a remarkable zoophyte of the family of, 1841, 72.
Actiniæ, T. P. Teale on the gemmiferous bodies and vermiform filaments of, 1838, 113.
—— in aquaria, R. Warington on the multiplication of, 1858, 133.
Actinism, estimation of, R. J. Fowler on a process for the, 1858, 47.
Actino-chemistry, contributions to, by R. Hunt, 1845, 29.
——, contributions to, by Sir J. F. W. Herschel, 1844, 12.
Actinometer, Sir J. F. W. Herschel on the principle and construction of the, 1833, 379.

Adansonia digitata of Western India, Dr. Buist on, 1859, 132.
Ægilops, Rev. Prof. Henslow on the Triticoidal forms of, 1856, 87.
——, Major Munro on the transmutation of, into Triticum, 1852, 68.
Æglina, fossil (Silurian), J. W. Salter on the genus, 1852, 60; Æ. mirabilis, new species, 60.
Aërial currents of the temperate zones, W. R. Birt on the probable causes of the, 1837, 34.
Aërolites, R. P. Greg on, 1854, 19.
Æther, Sir D. Brewster on the dichroism of a solution of stramonium in, 1842, 14.
Ætherification, results of a research on, by Prof. A. W. Williamson, 1850, 65.
African dress, notice of the adornment of an, 1854, 99.
Agricultural and manufacturing industry, J. P. Hennessy on, 1857, 162.
—— chemistry, in relation to the mineral theory of Baron Liebig, by J. B. Lawes and Dr. J. H. Gilbert, 1851, 45.
—— chemistry, J. B. Lawes and Dr. Gilbert on some points connected with, 1856, 172.
—— College, Royal Cirencester, Prof. Buckman's notes on experiments in the Botanical Garden of the, 1856, 83.
—— experiments at the Botanic Garden, Oxford, by Dr. Daubeny, 1847, 82.
—— labourers, Rev. T. Drury on the improvement of, 1844, 90.
—— labourers in the county of Norfolk, Sir J. Boileau on the state of the, 1845, 89.
—— labourers of England and Wales, J. Locke on the education of the, 1855, 171.
—— labourers, H. J. Ker Porter on the best plan of cottage for, 1860, 194; H. Roberts on the domiciliary condition of the labouring classes, 196.
—— machinery, W. Fairbairn on, 1858, 203.
—— products of Cornwall, Sir C. Lemon on the, 1841, 83.
—— schools near East Bourne, 1844, 87.
—— statistics, current and cost price of corn in England during ten years (1843–1854) as illustrating the value of, by J. T. Danson, 1854, 134.
—— statistics of the county of Aberdeen, A. Harvey on the, 1859, 210.
—— statistics of Ireland, G. R. Porter on the, 1849, 104.
—— statistics, how collected in Ireland, by Mr. Donnelly, 1858, 176.
Agriculture, analysis of three species of Fucus, by E. G. Schweitzer, 1845, 37, 38.
——, Prof. J. T. Way on the ashes of plants, 1845, 34.
Agriculture, J. P. Norton on the ashes of oats, 1845, 35.
——, F. C. Wrightson on the ashes of narcotic plants, 1845, 36.
——, W. Sharp on the ashes of wheat, 1845, 36.
——, A. Milward on the Upton draining tool, 1849, 122.
——, B. Samuelson on improvements in machines for tilling land, 1853, 121.
——, chloritic marl or phosphate of lime for manure, 1848, 69.
——, Dr. Canter on Malacca guano, 1845, 39.
——, Sir James Murray on the choice of perennial rather than annual fertilizers, 1857, 54.
——, J. B. Lawes and Dr. J. H. Gilbert on the effects of different manures on the composition of the mixed herbage of meadow-land, 1859, 70.
——, Prof. Liebig on mineral manure, 1845, 39.
——, W. C. Spooner on certain principles which obtain in the application of manures, 1846, 44.
——, Dr. Daubeny on the importance of ascertaining the portions of matter from organic sources that may be in the surface soil, 1842, 37.
——, Dr. Voelcker on the proportion of phosphoric acid in some natural waters, 1850, 63.
——, J. P. Norton on the composition of slate-rocks, and the soils formed from them, 1845, 38.
——, Rev. Dr. Buckland on the cause of the general presence of phosphorus in strata and in all fertile soils, on pseudo-coprolites, and the conversion of the contents of sewers and cesspools into manure, 1849, 67.
——, J. B. Lawes and Dr. J. H. Gilbert on the annual yield of nitrogen per acre in different crops, 1858, 52.
——, Prof. Henslow on nodules from the red crag, London clay, and greensand, 1845, 51.
——, Prof. Johnston on the causes, physical and chemical, of diversities of soils, 1853, 43.
——, Dr. Daubeny on the rationale of certain practices employed in, 1846, 42.
——, Dr. Daubeny on the chemical principles involved in the rotation of crops, 1845, 33.
——, Earl Fitzwilliam on statistical reports regarding, 1834, 693.
——, G. R. Porter on the systematic collection of the statistics of, 1839, 116.
——, J. Prideaux on the extent, causes and remedies of fungi destructive in, 1846, 44.
——, J. Clarke on the parasitic character of Rhinanthus crista-galli, 1848, 84.
——, Prof. Way on the fairy-rings of pastures, 1846, 43.

Agriculture, Rev. Dr. Thomson on meteorology in relation to, 1849, 33.
——, W. D. Cooley on a physico-geographical survey of the British Islands, particularly in relation to, 1846, 72.
Ague and consumption, Dr. Groshaus on the supposed antagonism between, 1847, 94.
Ainos (a Siberian race), Prof. von Middendorff on the, 1846, 115.
Air, atmospheric, Dr. Prout on, 1831-32, 570-574.
——, on applying atmospheric, to propulsion, 1846, 113.
——, blasts of, Prof. J. Thomson on fans for causing, 1852, 130.
——, expired, on the determination of the carbonic acid contained in the, by Dr. E. Smith, 1858, 142.
——, Dr. Andrews on an apparatus for determining the quantity of hygrometric moisture in the, 1851, 29.
——, Dr. Cormack on its effects when injected into the veins, 1840, 157.
——, Dr. Reid on the amount required for respiration, 1838, 131.
——, horizontal motion of the, F. Osler on a portable self-registering anemometer for recording the direction and amount of, 1858, 38.
——, Mr. Espy on an instrument to measure the expansion of, 1840, 31.
——, Prof. Phillips on the temperature of the, in York Minster, 1841, 29.
—— of tropical climates, Prof. Rankine's remarks on Prof. Smyth's mechanical process for cooling the, 1852, 128.
——, Prof. Stokes on the resistance of, to pendulums, 1848, 7.
——, G. Rush on the temperature of the upper regions of the, during balloon ascents, 1849, 30.
—— and water of towns, Dr. R. A. Smith on sulphuric acid in the, 1851, 52.
Air-bubbles formed in water, Prof. Tyndall on, 1851, 26.
Air-engine, on the means of realizing the advantages of the, by Prof. Rankine, 1854, 159.
Air-pump, new, 1855, 207.
——, modern, Prof. G. Wilson on the invention of the, 1859, 89.
——, improved form of, W. Ladd on an, 1860, 65.
Air-sirene, Prof. Donaldson's description of the, 1850, 176.
Air-tight fabrics, Prof. Williams on the therapeutic application of, 1842, 77.
Ajuh, a kind of whale, found by Dr. Vogel in the River Benué, Central Africa, description of the, 1856, 98.
Alarum for steam-boilers, J. Hopkinson on a safety, 1853, 119.
Albanians, Dr. Latham on the distribution of the, politically, 1856, 145.
Albatros, Prof. Retzius on the peculiar development of the Vermis cerebelli in the, 1855, 133.
Albinoism, Dr. T. Inman on a case of, in a black man, 1854, 110.
Albion mines, Nova Scotia, H. Poole on the meteorology of the, 1854, 35.
Albumen, Prof. Hayden on the physiological relations of, 1857, 110.
—— and caseine, A. Gages on the comparative action of hydrocyanic acid on, 1859, 162.
Alcohol, A. Gages on the action of chloride of nitrogen on, 1857, 47.
——, Prof. A. W. Williamson on the ætherification of, 1850, 65.
——, Dr. W. Marcet on the action of, on the nervous system, 1859, 170.
——, Prof. Graham on the concentration of, in Sömmering's experiments, 1854, 69.
——, A. Connel on the voltaic decomposition of, 1840, 81.
——, Dr. G. Bird on the products obtained by the action of nitric acid on, 1838, 55.
—— and nitric acid, Dr. T. Thomson on the specific heats of, 1837, 43.
Alcohols and tea, the action of, contrasted, by Dr. E. Smith, 1860, 145.
Alcynoë of the British seas, 1839, 85.
Alcyonella stagnorum, T. P. Teale on, 1836, 104.
Alderia, a new genus of nudibranchiate mollusca, Prof. Allman on, 1844, 65.
Alexandria imperatricis, Sir R. Schomburgk's description of, 1844, 71.
Alga, Prof. Allman on Sorodiscus rivularis discovered in Ireland, 1846, 89.
——, microscopic, as a cause of the phenomenon of the coloration of large masses of water, Prof. Allman on a, 1852, 64.
Algæ and other plants, Chevalier de Claussen on their employment in the manufacture of soaps, 1855, 103.
——, freshwater, Prof. G. B. Knowles on the movements of the Oscillatoriæ, 1856, 88.
——, freshwater, Prof. Allman on an apparently undescribed genus of, 1847, 81.
——, marine, Prof. Dickie on the distribution of the, on the British and Irish coasts, 1852, 65.
—— of the Isle of Wight, W. Thompson on the, 1846, 83.
——, Dr. F. Cohn on the sexuality of the, 1855, 122.
Algebra, Rev. Prof. Jarrett on the summation of certain circular functions, 1847, 5.
Algebraic couples, or conjugate functions, as tending to illustrate the doctrine of imaginary quantities, Sir W. R. Hamilton on, 1834, 519.
—— equation, Prof. Sylvester on the relation of Sturm's auxiliary functions to the roots of an, 1841, 23.

Algebraic equations, Mr. Peebles on the expressibility of the roots of, 1840, 54.
—— equivalence, Rev. Prof. Jarrett on, 1845, 1.
—— geometry, Prof. Stevelly on the doubtful algebraic sign in certain formulæ of, 1836, 5.
Alkalies, Dr. Will on an improved method of ascertaining the commercial value of, 1843, 37.
——, organic, H. How on the hyposulphites of the, 1854, 70.
Alkalimetry, Dr. A. P. Price on a new method of, 1854, 74.
Alkaline earths, Dr. Matthiessen on the metals of the, 1855, 66.
—— emanations from sewers and cesspools, Dr. Gladstone on the, 1856, 57.
—— sulphates contained in alums, Prof. Frankland on conserving the, 1855, 62.
Alkaloid, new, from a new species of Pereira, the Cryptocaria pretiosa, 1844, 85.
Alkaloids produced during the destructive distillation of animal substances, Prof. T. Anderson on the, 1854, 64.
Alligator, S. Wood on the discovery of an, in the freshwater cliff at Hordwell, 1844, 50.
——, sharp-nosed, Prof. Owen on the teeth of, 1838, 144.
Alloxan and alloxantine, Prof. Gregory on the preparation of, 1840, 74.
Alloys, Prof. F. C. Calvert on the expansion of, 1858, 46.
——, Prof. F. C. Calvert and R. Johnson on, 1855, 50.
——, Prof. F. C. Calvert and R. Johnson on the specific gravities of, 1859, 66.
——, C. V. Walker on the voltaic reduction of, 1845, 30.
Alluvial basin of the Middle Rhine, Sir R. I. Murchison on the, 1843, 56.
—— deposits of Belfast, J. Grainger on the shells found in the, 1852, 74.
—— terraces on the rivers of New Brunswick, 1840, 116.
Alluvium, ancient, with bones of Pachydermata, 1850, 91.
Aloe, Dr. Daubeny on an irregular production of flowers in an, 1842, 65.
Alpaca, W. Danson on the, 1840, 131.
—— wool, W. Danson on, 1839, 92.
Alphabet for the use of geographers, ethnologists, &c., A. J. Ellis on an, 1855, 143.
a Lyræ, Rev. Dr. Robinson on the parallax of, 1837, 3.
Alsine stricta, British, 1844, 72.
Altitude-observations at sea, Prof. Smyth on, 1855, 29.
Altitudes of places in Great Britain and Ireland, on the compilation of a general table of, 1831–32, 581.
Alum, Dr. Apjohn on a new variety of, 1837, 49.
Alum, Dr. Odling on its effects in panification, 1857, 55.
—— manufacture of Glasgow, Prof. T. Thomson on the, 1840, 61.
Alums, Prof. Frankland on a mode of conserving the alkaline sulphates contained in, 1855, 62.
Alumina, R. Phillips on some properties of, 1848, 58.
——, superphosphate of, Dr. Daubeny on refining sugar with, 1857, 45.
—— and silica, Prof. Chapman on the isomorphous relations of, 1850, 50.
Aluminium, Dr. S. Macadam on the production of a frosted surface on articles made of, 1858, 56.
——, R. Reynolds on the practical application of, 1858, 66.
——, Prof. J. W. Mallet on the atomic weight of, 1857, 53
——, Prof. W. Thomson on the thermo-electric position of, 1855, 20.
——, notice of a large bar of, 1855, 64.
——, ammonio-iodide of, Rev. J. B. Reade on, 1857, 57.
Alysidota conferta, G. Busk on, 1859, 146.
Amalgams, J. P. Joule on some, 1850, 55.
Amaurosis, Dr. Prichard on the treatment of, 1836, 108.
Amber, Sir D. Brewster on a remarkable specimen of, 1834, 574.
America, R. H. Walsh on equitable villages in, 1857, 170.
American Indians, A. K. Isbister on the Nehanni tribe of a Koloochian class of, 1847, 121.
American, British North, exploring expedition, Capt. J. Palliser on the course and results of, 1860, 170.
Amethyst, Sir D. Brewster on the crystallization of tourmaline, titanium, and quartz within, 1853, 3.
—— plates, Sir D. Brewster on the use of, in experiments on the polarization of light, 1858, 13.
Ammonia, animal, Rev. J. B. Reade on its formation, evolution, and office, 1858, 65.
—— and boracic acid, R. Warington on the production of, by volcanic action, 1854, 76.
—— and nitric acid in rain-water, J. B. Lawes and Dr. J. H. Gilbert on the amounts of, and methods of estimating, 1854, 70, 164.
—— in volcanic emanation, R. Warington on the source of, 1858, 71.
——, A. Gages on some arseniates of, 1857, 47.
——, commercial carbonate of, Mr. Scanlan on the constitution of, 1838, 63.
——, chloro-arsenite of, Dr. W. Wallace on, 1858, 70.
——, lithiate of, a secretion of insects, W. Herapath on, 1836, 70.

Ammonia, molybdate of, as a test for detecting phosphoric acid in natural waters, Dr. A. Voelcker on, 1850, 64.
——, purpurate of, Prof. Gregory on a new process for preparing, 1840, 74.
——, thionurate of, Prof. Gregory on the preparation of, 1840, 74.
Ammoniacal salts, Dr. J. H. Gladstone on their decomposition by heat, 1857, 48.
Ammonio-iodides of metals, Rev. J. B. Reade on a new method of forming, 1857, 55.
Ammonites, upper lias, T. Wright on the occurrence of, in the (so-called) basement beds of the inferior oolite, 1856, 80.
Ammonium, formation of the cyanide of, by the destructive distillation of peat, 1857, 58.
—— and potassium, palladio-chlorides of, Sir D. Brewster on the dichroism of the, 1842, 13.
Amnii, liquor, Dr. Rees on the, 1838, 126.
Amole, Dr. Schiede on the plant called, 1835, 77.
Amphioxus lanceolatus, Prof. Huxley on the corpuscles of the blood of, 1847, 95.
Amphitrite, Sir J. G. Dalyell on the, 1840, 140.
Amphitype, a new photographic process, Sir J. F. W. Herschel on, 1844, 12.
Amputations in the Glasgow Infirmary, results of, by Dr. Lawrie, 1840, 163.
Amygdalin, Dr. T. Thomson and T. Richardson on, 1838, 48.
Amygdaloid, Rev. D. Williams on the, Exeter, 1844, 55.
Amyle, Dr. Turnbull on the physiological properties of, 1854, 76.
Amylogenic bodies, Dr. Kemp on, 1845, 31.
Anæsthetics, Dr. C. Kidd on the nature of death from the administration of, 1860, 136.
Analyses of the ashes of oats, 1845, 35.
—— of the ashes of plants, 1845, 34.
—— of the ashes of narcotic plants, 1845, 36.
—— of the ashes of wheat, 1845, 36.
—— of three species of Fucus, 1845, 37.
——, W. West on the use of stating the nature of the methods employed in, 1846, 42.
Analysis, Prof. Young on the principle of continuity in reference to certain results of, 1846, 1.
Analytical mechanics, Prof. Braschmann on the principles of, 1841, 4.
—— mechanics, M. Jacobi on a new general principle of, 1842, 2.
Anastomosis, aneurism by, R. Adams on, 1835, 99.
Anatomy of the brain in some small quadrupeds, R. Garner on, 1858, 122.
—— of the eye, with reference to its power of adjustment, W. Bowman on the, 1847, 91.
Anatomy of the Brachiopoda, A. Hancock on the, 1856, 94.
—— of the Bryozoa, Prof. Allman on the, 1849, 71.
—— of Doris, A. Hancock and Dr. Embleton on the, 1850, 124.
—— of the hydrostatic Acalephæ, Prof. Huxley on the, 1851, 78.
—— of a Lucernaria, Prof. Owen on the, 1849, 78.
—— of monocotyledonous stems, Prof. Henfrey on the, 1847, 83.
Andalusite, Connemara, analysis of, by Prof. Rowney, 1860, 71.
Anemometer, Beckley's self-registering, J. Welsh's description of, 1856, 38.
——, Dr. Whewell's, Rev. Dr. Robinson on a modification of, 1846, 111.
——, improved, 1844, 23.
——, integrating, A. F. Osler on an improved, 1849, 26.
——, Osler's new integrating, registers from, 1850, 46.
——, new, Dr. Banks on a, 1846, 12.
——, new, J. T. Goddard's, 1845, 18.
——, new, Rev. Dr. Whewell on a, 1835, 29.
——, Dr. Whewell's further account of, 1836, 39.
——, Dr. Whewell on the principle of his, 1837, 32; Mr. Southwood's observations with, 33.
——, new registering, 1837, 33.
——, portable self-registering, for recording the direction and amount of horizontal motion of the air, A. F. Osler on a, 1858, 38.
—— and rain-gauge, Osler's, at the Liverpool observatory, 1854, 34.
—— and rain-gauge, F. Osler on a new registering, 1837, 33.
Anemometers, A. F. Osler on the results of certain, 1849, 25.
—— at Plymouth and Birmingham, F. Osler's account of some indications of the, 1839, 17.
—— and resolving scales, Capt. Cockburn on, 1847, 40.
Anemometrical observations, naval, Prof. Smyth on, 1855, 45.
—— observations at sea, J. Welsh on, 1856, 38.
Anemometry, contributions to:—the Therm-anemometer, by Prof. Phillips, 1849, 28.
Anemoscope for observing vertical currents in the atmosphere, Prof. Hennessy on an, 1856, 40; 1857, 30.
——, universal, for showing the horizontal and vertical direction of a current in the atmosphere, Prof. Hennessy on a, 1856, 40.
Aneroid métallique, observations with the, during a tour through Palestine and along the shores of the Dead Sea, by H. Poole, 1856, 41.

Aneurism by anastomosis, R. Adams on, 1835, 99.
——, external, Prof. Harrison on its treatment by pressure, 1843, 80.
——, double popliteal, R. Adams on the new circulating channels in, 1836, 123.
Anglemeter, Bakewell's, 1840, 210.
Angles of dock-gates and the cells of bees, C. M. Willich on the, 1859, 10.
Anglo-Saxons, J. B. Davis on the forms of the crania of the, 1856, 108.
Anglo-Saxon urn, C. R. Smith on a Roman sepulchral inscription on an, 1855, 145.
Angular measurement, P. Adie on a new reflecting instrument for, 1860, 59.
Anhydrous acid, table of the proportions of, in acetic acid, 1834, 571.
Animal and a plant, J. Hogg on the distinctions of an, 1860, 111.
—— kingdom, Prof. Agassiz on the principles of classification in the, 1835, 67.
—— life in the Arctic regions, A. Petermann on the distribution of, 1852, 112.
——, new glirine, from Mexico, Dr. J. E. Gray on a, 1841, 70.
Animal substances, A. Goadby on the conservation of, 1844, 69.
—— substances, Dr. T. Andrews on the products of the action of heat on, 1851, 43.
—— substances, Dr. G. O. Rees on fluoric acid as a constituent of, 1839, 56.
—— substances, Dr. Macartney on the means of preserving, 1836, 99.
—— tissues, Dr. Letheby on the action of oxalic acid upon the, 1846, 41.
Animals and plants found in the sulphureous waters of Yorkshire, Dr. Lankester on the, 1840, 143.
—— and plants, Dr. Lankester on the alternation of generations and parthenogenesis in, 1857, 113.
——, diving, Dr. Houston on the circulating organs in, 1835, 81.
——, domestic, W. Ogilby on their dispersion, in connexion with the primary ethnological divisions of the human race, 1857, 105.
——, domestic, J. Crawfurd on their influence on the progress of civilization, 1860, 155.
—— in the atmosphere and the sea, Dr. T. Williams on the physical conditions regulating the vertical distribution of, 1848, 83.
——, marine, C. S. Bate on the boring of, 1849, 73.
——, marine, notes on, by C. W. Peach, 1859, 155.
—— new to the British seas, Prof. E. Forbes on some, 1844, 64.
—— of New Holland, Dr. J. E. Gray on the geographical distribution of the, 1841, 68.
—— of Tibet and India, H. and R. Schlagintweit on the, 1857, 106.
Animals, Sir D. Brewster on certain abnormal structures in the crystalline lenses of, 1858, 7.
——, Prof. Allen Thomson on fecundation in, 1855, 139.
——, Dr. S. Macadam on the presence of iodine in, 1854, 72.
——, Mr. R. Rigg on the formation or secretion of carbon by, 1844, 33.
——, Dr. Odling and Dr. Dupré on the presence of copper in the tissues of, 1857, 55.
——, Dr. R. D. Thomson on an important chemical law in the nutrition of, 1846, 41.
——, Dr. R. Fowler on the sensational, emotional, intellectual, and instinctive capacities of, compared with those of man, 1858, 134.
——, Rev. L. Jenyns on the variation of species, 1856, 101.
——, Prof. Harrison on the bones in the hearts of certain, 1835, 85.
——, Prof. W. Macdonald on the vertebral homologies in, 1855, 128.
——, Prof. Retzius on the antrum pylori in, 1855, 132.
——, suggestions for the observation of periodic changes in, 1844, 70.
——, W. Ogilby on the geographical distribution of, in connexion with the progress of human civilization, 1852, 78.
——, vertebrate, in the tertiary beds of Norfolk and Suffolk, E. Charlesworth on, 1836, 48.
Animalculæ of sulphureous waters, Dr. Lankester on the, 1840, 143.
Animalcules (Ehrenberg's Polycystina) from Barbadoes, Sir R. H. Schomburgk on, 1847, 70.
——, infusorial, J. Samuelson on the development of, 1856, 98.
—— in human milk, Dr. G. D. Gibb on, 1860, 131.
Ankle-joint, J. Douglas on the dislocation of the, 1840, 165.
Annelida, Dr. T. Williams on the structure and functions of the branchial organs of the, 1848, 83.
Annelidan larva, Prof. Allman on a peculiar, 1852, 70.
Annelide, tubicolar, remarkable, 1841, 72.
Annelid tracks from the representatives of the millstone grits of Clare, Prof. Harkness on, 1854, 86.
Annulosa, lower, Prof. Huxley on the vascular system of the, 1854, 109.
Annulose animals, on, 1834, 608.
Anobia in libraries, Sir T. Phillips on a method of destroying the, 1837, 99.
Anomoura, C. Spence Bate on the uses of the fifth pair of legs in the, 1850, 117.
Antarctic currents, on, 1854, 117.
Antarctic expeditions, Capt. Maury on, 1860, 44.
—— regions, Capt. Maury on the climates of the, 1860, 46.

Antarctic seas, Capt. Washington on expeditions to the, 1838, 97.
Anthracite deposits and vegetable remains occurring in the lower Silurians of the south of Scotland, Prof. Harkness on the, 1854, 86.
——, Silurian, of Cavan, Dr. Whitty on the, 1854, 95.
Anthracosis in a lead-miner, Dr. Crawford on a case of, 1838, 130.
Antimonial compound applicable as a pigment, Dr. Traill on an, 1837, 58.
Antimony, Dr. W. Odling on the detection of, for medico-legal purposes, 1856, 57.
——, crystallized oxychloride of, Prof. J. F. W. Johnston on the chemical composition of the, 1834, 587.
——, glass of, Mr. R. Potter, jun., on its power to reflect light, 1833, 377.
Antiques found at Cirencester, Prof. Buckman on some, as evidence of the domestic manners of the Romans, 1856, 108.
Antiquities, Hoylake, notices of the, 1854, 129.
——, on the Roman camp at Ardoch, and the military works near it, by Col. Sir H. James, 1859, 183.
——, on the sculptured stones of Scotland, by J. Stuart, 1859, 197.
Antrum pylori in man and animals, Prof. Retzius on the, 1855, 132.
Aorta, thoracic, Sir D. J. H. Dickson on sudden death from the rupture of an aneurism of the, 1842, 83.
Apatite, Norwegian, Prof. Voelcker on the composition of, 1857, 59.
Apes, anthropoid, Prof. Owen on the, 1854, 111.
Apolemia Gettiana, of the family Physophoridæ, British, 1843, 76.
Aqua-marine, notice of a magnificent specimen of, 1831–32, 86.
Aquaria, N. B. Ward on, 1858, 133.
——, on the multiplication of Actiniæ in, by R. Warington, 1858, 133.
——, on a method of applying the compound microscope to the sides or top of, by Prof. Redfern, 1857, 106.
——, small, observations made in, by R. Warington, 1854, 115.
Aquarium, marine, J. Price on aërating the water of the, 1855, 117.
——, marine, on the effects of an excess or want of heat and light in the, by R. Warington, 1855, 117.
Aquavivaria, on a plan of aërating, adopted by Dr. Ball, 1854, 115.
Arabian leprosy, Dr. Hancock on the, 1837, 128.
Arabic, Mr. J. Crawfurd on English words derived from the, 1849, 84.
Arabic-speaking population of the world, A. Ameuney on the, 1859, 176.
Arachnidia hippotheides, 1858, 128.
Arago's (M.) rotating disc, Prof. Matteucci on the distribution of electrical currents in, 1853, 5.
Aranea avicularia, Dr. Rootsey on, 1836, 98.
Arapatta, of the Caribes of Guiana, Dr. Hancock on the disease called, 1837, 128.
Arca raridentata taken in a living state, 1846, 69.
Arch, Prof. Moseley on the equilibrium of the, 1837, 133.
——, oblique, P. Nicholson on the principles of the, 1838, 152.
Architecture, on the geometrical basis of beauty as applied to, by R. D. Hay, 1850, 131.
——, naval, H. Chatfield on, 1836, 129.
——, naval, J. Owen on, 1833, 430.
Arctic and Antarctic currents, A. G. Findlay on, and their connexion with the fate of Sir John Franklin, 1854, 117.
—— circle, on the trunk of a tree discovered erect as it grew within the, by Sir E. Belcher, 1855, 101.
—— flora, J. Taylor on the, 1859, 140.
—— regions, on some additions to the geology of the, by J. W. Salter, 1855, 211.
—— regions, on the discovery of Ichthyosaurus and other fossils in the, by Capt. Sir E. Belcher, 1855, 79.
—— searching expedition, final, C. R. Markham on the, 1857, 146.
Ardea alba, A. Strickland on the, 1838, 106.
Arenaria marina found on the banks of the Droitwich canal, 1847, 61.
Arenicola didyma, fossil, from the Cambrian rocks, 1855, 95.
Argonaut, on a new species of, A. Owenii, with observations on the A. gondola, by Lovell Reeve, 1848, 80.
——, on the Hectocotylus or male of the, by Prof. Kölliker, 1855, 127.
Argonauta Argo, Madame J. Power's further experiments and observations on the, 1844, 74; on the polypus of the, 76.
Argulus foliaceus, 1842, 69.
Argyleshire, Prof. Nicol on the geology of the southern extremity of Cantyre, 1850, 100.
Arithmetic, Chinese, account of a treatise on, 1852, 1.
Arithmometer, or calculating machine, Colmar's, 1854, 1.
Armadillo, Dr. Allman on certain peculiarities of the six-banded, 1843, 68.
Armadilloes, extinct gigantic, of South America, Prof. Owen on some additional species of, 1846, 67.
Armeria maritima, Dr. A. Voelcker on the composition of the ash of, and remarks on the geographical distribution of that plant, 1849, 43.

Army, on phthisis in the, by F. G. P. Neison, 1856, 189.
Arnott's stove, J. N. Hearder on, 1841, 105.
Arseniates of ammonia, A. Gages on some, 1857, 47.
Arsenic, Dr. Daubeny on its effects on vegetation, 1836, 76.
——, Dr. Clark on a mode of detecting minute portions of, 1840, 83.
——, Dr. Odling on Marsh's test for, 1859, 75.
——, on the compounds of tin with, by E. Haeffely, 1855, 64.
——, Dr. Bevan on the tests for, 1843, 67.
——, iodide of, Dr. A. T. Thomson on the medicinal and poisonous properties of, 1838, 123.
——, vapour of, Rev. T. Exley on the specific gravity of, 1858, 64.
Arsenical poisons, W. Herapath on, 1836, 67.
Arsenious acid, J. Stein on a method of separating arsenic acid from, 1850, 62.
—— acid, solution of, in chloride of arsenic, Dr. W. Wallace on the, 1858, 69.
—— and sulphuric acids, Dr. Schafhaeutl on a new compound of, 1840, 69.
Arsenites, Dr. Apjohn on the chemistry of the, 1843, 37.
Arteries, Dr. Houston on the means adopted by nature in the suppression of hæmorrhage from large, 1843, 80.
——, hæmorrhage from, Dr. Macartney on means to suppress, 1839, 97.
—— leading to inflamed parts, Dr. Alison on the vital properties of, 1834, 674; 1835, 88.
——, J. Hodgson on the red appearance on the internal coat of, 1839, 108.
—— of the six-banded armadillo, Dr. Allman on the, 1843, 68.
—— and nerves, Dr. Macartney on rules for finding the position of the, 1839, 102.
Artesian springs, M. Fauvelle on a new method of boring for, 1846, 105.
—— well in the new red sandstone at the Wolverhampton waterworks, J. F. Bateman on the, 1859, 229.
—— well on Southampton Common, J. R. Keele on the, 1846, 52.
—— wells, Rev. Dr. Buckland on the applicability of M. Fauvelle's mode of boring, to the well at Southampton, and to other wells, &c., 1846, 56.
Artificial crystals, A. Crosse on, 1836, 47.
Artillery, on the bursting of guns and cannons, by S. Smith, 1858, 221.
—— and projectiles, W. B. Adams on, 1855, 203.
Arà, a flour made by the Warrau Indians from the Muriehi, or Palm of Guiana, 1845, 71.
Arvicolæ, on the species of, found in Nova Scotia, by J. W. Dawson, 1855, 110.
Aryan or Indo-Germanic theory of races, J. Crawfurd on the, 1860, 154.
Asaphus latifrons, J. W. Salter on, 1852, 59.
Ascaris, Dr. Ballingham on a new species of (A. alata), 1838, 115.
—— mystax, on the fecundation of the ova in, by Dr. H. Nelson, 1855, 131.
——, on the formation and structure of the spermatozoa in, by Prof. Allen Thomson, 1855, 138.
Ascidia echinata, 1839, 80.
—— rugosa, 1839, 80.
—— rubens, 1839, 80.
Ascidians, compound, on their position in the zoological scale, 1844, 66.
——, Prof. Huxley on the structure of the, 1852, 76.
Ascites, albuminous, with hydatids, Sir D. J. H. Dickson on a case of, 1841, 81.
Ascium (Bush Rope) of Guiana, Dr. Hancock on a new species of, 1836, 104.
Ashes of plants, Rev. J. B. Reade on the, 1837, 103.
Aspergillum, or watering-pot mollusk, on the, 1860, 120.
Asphyxia, Dr. Alison on the cause of death in, 1835, 90.
——, Dr. J. Reid on the manner in which the vital actions are arrested in, 1840, 151.
Ass, wild, 1857, 107.
Assafœtida, oil of, Prof. Tilley and Dr. Maclagan on the, 1845, 33.
Assyrian inscriptions, Rev. Dr. Hincks on the language of the, 1860, 156.
—— inscriptions, Rev. Dr. Hincks on the ethnological bearing of the discoveries in connexion with the, 1852, 85.
Assyrians, ancient, Rev. Dr. Hincks on the language and mode of writing of the, 1850, 140.
Assyrio-Babylonian lunar year, Rev. Dr. Hincks on the, 1860, 35.
Astarte Withami taken in a living state, 1846, 69.
Astecs, ethnological remarks on the, by Dr. Latham, 1853, 88.
Asteridæ from the upper Silurian rocks, J. W. Salter on some new forms of, 1856, 76.
Asteroid No. 46, Dr. J. Lee on its discovery by Mr. Pogson, 1857, 31.
Asteroids and meteorolites, R. P. Greg on, 1854, 19.
——, proposed theory of the origin of the, by J. Nasmyth, 1852, 21.
Astigmatism of a defective eye, Prof. Stokes on a mode of measuring the, 1849, 10.
Astronomical circle, Rev. Dr. Robinson on determining the index error of an, 1843, 16.
—— clock, M. Bessel on the, 1842, 1.
—— clock, Mr. Ettrick on the, 1835, 128.

Astronomical clock, Rev. Dr. Robinson on the barometric compensation of the pendulum, 1843, 17, 102.
—— instruments, C. May on the application of chilled cast iron to the pivots of, 1851, 114.
—— observations, Messrs. Bond on apparatus for making, by means of electro-magnetism, 1851, 21.
—— observations, Prof. Boole on the theory of, 1857, 2.
—— problems, Prof. J. C. Adams on the application of graphical methods to the solution of, and in particular to the determination of the perturbations of planets and comets, 1849, 1.
Astronomy, Chinese, J. B. Lindsay on, 1859, 35.
——, meteoric, researches in, by D. Vaughan, 1854, 26.
Atherstone Union, C. H. Bracebridge on rural statistics, illustrated by the, 1844, 93.
Atlantic cable, on diminishing the strain by an elastic regulator, 1857, 180.
—— telegraph, North, geography of the, by Col. Schaffner, 1860, 178.
—— waves, their magnitude, velocity, and phenomena, Rev. Dr. Scoresby on, 1850, 26.
Atmopolarimeter, Dr. F. Bernard on an, 1854, 6.
Atmosphere and the earth, on the general and gradual desiccation of the, by J. S. Wilson, 1858, 155.
—— during cholera, on the condition of the, by Dr. R. D. Thomson, 1855, 71.
——, its influence on the rate of mortality, 1842, 97.
——, its state during the prevalence of influenza, by G. H. Fielding, 1833, 461.
——, on the pressure of the, and its power in modifying and determining hæmorrhagic disease, by J. Milligan, 1858, 138.
——, J. Nott on the electricity of the, 1843, 15.
——, instrument for measuring the electricity of the, 1837, 38.
——, Prof. Wheatstone on Quetelet's investigations relating to the electricity of the, 1849, 11.
——, on an instrument for observing vertical currents in the, by Prof. Hennessy, 1856, 40.
——, on the vertical currents of the, by Prof. Hennessy, 1857, 30.
——, on the causes of the excess of the mean temperature of rivers above that of the, by W. J. M. Rankine, 1852, 30.
——, on the heating of the, by contact with the earth's surface, by Prof. Hennessy, 1858, 36.
——, on the aqueous vapour of the, by Admiral FitzRoy, 1859, 50.
——, T. Hopkins on the means of computing the quantities of aqueous vapour in the, 1850, 36.
Atmosphere, T. Hopkins on computing the quantity of vapour contained in a vertical column of the, 1849, 24.
——, Col. James on the refraction of the, 1858, 38.
——, Sir D. Brewster on the polarisation of the, 1847, 32.
——, Sir D. Brewster on some new phænomena in the polarisation of the, 1860, 6.
——, H. H. Watson on the quantity of carbonic acid in the, 1834, 383.
——, Sir J. W. Lubbock on Poisson's theory of the constitution of the, 1837, 31.
——, on the natural obstructions in the, preventing the view of distant objects, by A. Cruickshank, 1859, 49.
—— of the moon, J. Grooby on the, 1847, 8.
Atmospheres, deteriorated, apparatus for determining the quantity of carbonic acid gas in, by C. T. Coathupe, 1839, 63.
——, deteriorated, C. T. Coathupe on respiration of, 1839, 108.
Atmospheric air, Dr. Prout on, 1831–32, 570–574.
—— air, W. West on detecting gases present in, 1836, 77.
—— circulation, on the grand currents of, by Prof. J. Thomson, 1857, 38.
—— daily and yearly fluctuations, Dr. Buist on, 1852, 25.
—— disturbances, and on a remarkable storm at Bombay, by Col. Sykes, 1848, 41.
—— electricity, A. Crosse on, 1836, 48.
—— electricity, on the detection and measurement of, by M. J. Johnson, 1855, 40.
—— electricity in the United States, Prof. Loomis on, 1857, 32.
—— electricity, on Dellman's method of observing, by Prof. W. Thomson, 1856, 17.
—— electricity, on the necessity for incessant recording, and for simultaneous observations in different localities, for the investigation of, by Prof. W. Thomson, 1859, 27.
—— electricity, Prof. W. Thomson on, 1860, 53.
—— movements, on the effects of the earth's rotation on, by D. Vaughan, 1859, 41.
—— phenomena, L. Howard on a cycle of eighteen years in, 1842, 24.
—— phenomena, E. J. Lowe on some, 1851, 33.
—— pressure, W. Maugham on a mode of obtaining an increase of, 1836, 73.
—— pressure during long periods of time, Prof. Rankine on a barometric pendulum for the registration of, 1853, 26.
—— pressure on the animal frame, J. Dalton on the effects of, 1831–32, 85.

Atmospheric railway, C. Vignoles on the, 1842, 100.
—— railway, Kingstown and Dublin line, 1843, 101.
—— recorder, G. Dollond on an, 1846, 17.
—— refraction, uncommon, M. Moggridge on two cases of, 1848, 33.
—— waves, Admiral FitzRoy on, 1859, 50.
—— waves, W. R. Birt on, 1846, 35; 1860, 38.
Atmotic ship, Hon. W. Bland on an, 1860, 60.
Atomic weights, atomic volumes, and properties of the chemical elements, J. F. Coleman on some remarkable relations existing between the, 1860, 66.
—— weights, Dr. E. Turner on, 1831–32, 576.
—— weights, Dr. Turner's experiments on, 1833, 399.
—— weights of elementary bodies, Prof. Clark on the, 1839, 43.
—— weights of the families of the elements, J. Mercer on the relation of the, 1858, 57.
—— weights of the elements of six chemical families, J. Mercer on the, 1858, 59.
—— weight of magnesium, A. Macdonnell on the, 1852, 36.
—— weight of oxygen, Prof. W. A. Miller on the, 1860, 70.
—— weights of platinum and barium, Prof. T. Andrews on the, 1852, 33.
—— weight of tin, Dr. W. Odling on the, 1858, 58.
Atrato, explorations through the valley of the, to the Pacific, in search of a route for a ship-canal, by F. M. Kelley, 1856, 162.
Attraction and repulsion, on the alternate spheres of, by Rev. T. Exley, 1844, 39.
——, electrical, Sir W. S. Harris on, 1835, 17.
——, electrical, Sir W. S. Harris on some new phenomena of, 1833, 386.
Attractions, theory of, Rev. Prof. Jellett on some general propositions connected with the, 1857, 3.
Auchenia, W. Danson on the introduction of a species of, into Britain, for obtaining wool, 1839, 92.
Aurora, G. A. Rowell on the cause of the, 1840, 48.
——, G. A. Rowell on the cause of the, and the declination of the needle, 1847, 41.
——, Dr. Hooker's observations of an, 1848, 18.
—— at Point Barrow, Major-Gen. Sabine on the frequency of the, 1857, 14.
—— borealis, on the nature of, 1831–32, 85.
—— borealis, on an arch of the, 1833, 401; directions for observations of the, 486.
—— borealis, on the, 1852, 26.
Aurora borealis, W. Herapath on the, 1836, 32.
—— borealis of August 11, 1836, Dr. Traill on the, 1836, 32.
—— borealis, S. H. Christie on its occurrence in England during summer, 1837, 28.
—— borealis, Rev. G. Fisher on the nature and origin of the, 1845, 22.
—— borealis at Alten, 1846, 12.
—— borealis, Dr. Siljeström on those variations of the force and the direction of the terrestrial magnetism which seem to depend on the, 1848, 4.
—— borealis, notice of, by J. K. Watts, 1851, 41.
—— borealis, Admiral Sir J. Ross on the, 1835, 18; 1855, 42.
Auroræ, notices of, by J. Jenkins, 1848, 22.
Auroral arches, Rev. Prof. Chevallier on the height of, 1847, 7.
Auscultation, Dr. Brooke on an instrument to assist in the discovery of foreign bodies by, 1845, 86.
——, Dr. C. J. B. Williams on the construction and application of instruments used in, 1842, 75.
Australian expedition, communications on an, by Capt. Sturt, Dr. Blundell, and G. S. Wilson, 1854, 125.
Avenella dilatata, 1858, 128.
Aves constrictipedes and inconstrictipedes, J. Hogg on the classification of, 1846, 77, 78.
Avicula contorta beds and lower lias in the south of England, Dr. T. Wright on the, 1860, 108.
Awalian tribes of the Tarai, at the foot of the Himalayas, J. B. Davis on the, 1859, 177.
Axe, miner's, ancient, recently discovered in the Forest of Dean, description of, by R. Mushet, 1856, 71.
Axles, straight, for locomotives, C. Vignoles on, 1842, 104.
——, railway, J. Nasmyth on the strength of hammered and annealed, 1842, 105.
Azimuth circle, G. B. Airy on a question of probabilities which occurs in the use of a fixed collimator for the verification of the constancy of position of an, 1850, 1.
Azote, atomic weight of, 1839, 49.

Babinet's (M.) homolographic maps, notice of, 1854, 2.
—— homolographic maps, Prof. Hennessy on, 1856, 112.
Bache's tide observations, Rev. Dr. Whewell on, 1854, 28.
Balaklava tempest, on the, and the mode of interpreting barometrical fluctuations, by T. Dobson, 1856, 36.
Balance, revolving, Mr. Lothian on a, 1840, 206.
Balance spring, glass, for chronometers, Mr. E. J. Dent on a, 1833, 421.

Balloon ascents for meteorological objects, Col. Sykes on, 1858, 39.
Balloons, on observations of the barometer and thermometer made during ascents in, by G. Rush, 1849, 29.
Banking, London, on the family principle in, by J. W. Gilbart, 1856, 143.
Banks, Joint-stock, on the rise, progress, and condition of, by J. Knight, 1854, 138.
——, Joint-stock, reasons for extending limited liability to, 1857, 165; on the recent legislation relative to, 166.
Barbacenia, Sir R. Schomburgk on a new species of, 1844, 71.
Barbel, Prof. Owen on the pharyngeal tooth of the, 1838, 143.
Barège mobile, or canalization of rivers, 1844, 99.
Barium, Prof. T. Andrews on the atomic weight of, 1852, 33.
—— and strontium, Dr. Hare on the preparations of, 1839, 36.
Bark, Matias, Dr. Mackay on the chemical and medicinal properties of, 1839, 61; 1840, 160.
Barley crops, on the injury of parasitic plants to, 1848, 84.
Barnacles, Sir C. Lyell on the occurrence of a stratum of stones covered with, in the red crag at Wherstead, 1851, 65.
Barometer, on the diurnal variations of the, by T. Hopkins, 1844, 22.
——, G. Hutchison on the nature and causes of the diurnal oscillations of the, 1843, 19.
——, J. A. Broun on the laws of the diurnal variation of the, within the tropics, 1860, 20.
——, on the horary oscillations of the, 1831–32, 86.
——, T. Hopkins on the relations of the semidiurnal movements of the, to land and sea breezes, 1846, 25.
——, on the semidiurnal and annual variations of the, by J. A. Broun, 1859, 43.
——, on the diurnal variation of the, by T. Davies, 1859, 50.
——, Rev. J. Hailstone on a peculiar oscillation of the, 1834, 569.
——, Mr. Espy on the four daily fluctuations of the, 1840, 55.
——, on the irregular movements of the, by T. Hopkins, 1844, 21.
——, solar variation, through the seasons, of the, in the climate of London, by Luke Howard, 1844, 14.
——, on observations of the, made during ascents in balloons, by G. Rush, 1849, 29.
——, Prof. Stevelly on a method of filling the, without the aid of an air-pump, 1839, 21.
—— pump, for filling barometer-tubes in vacuo, 1844, 24.
——, new, on the construction of a, by Rev. Prof. Miller, 1833, 414.
Barometer, new standard portable mountain, by G. J. Symons, 1858, 39.
——, P. M'Farlane on a new construction of the, 1840, 55.
——, portable, improved, 1831–32, 581.
——, portable, new method of constructing a, by J. Newman, 1833, 417.
—— with an enlarged scale, by W. L. Wharton, 1833, 414.
——, aneroid, daily comparison of, with a Board of Trade barometer by captains of ships at sea, Dr. J. Lee on the, 1858, 38.
——, Breguet's, Rev. Prof. Cumming on a, 1833, 418.
——, linseed oil, 1831–32, 86.
——, C. Brooke on a self-registering, 1846, 17.
——, self-registering, Prof. Stevelly on a, 1835, 109.
——, wheel, Sir W. S. Harris on the construction of a new, 1833, 414.
Barometers, Bursill's, notice of, 1841, 42.
——, M. R. von Schlagintweit on thermobarometers compared with, at great heights, 1860, 50.
Barometric formula, Dr. Apjohn on the correction to be applied for moisture to the, 1843, 20.
—— pendulum, for the registration of the mean atmospheric pressure during long periods of time, Prof. Rankine on a, 1853, 26.
—— pressure, Admiral FitzRoy on the areas or lines of, 1860, 41.
—— readings, M. R. von Schlagintweit on some results deduced from comparisons of the boiling-point with, 1860, 50.
Barometrical fluctuations, T. Dobson on the mode of interpreting, 1856, 36.
—— instrument for travellers in mountainous districts, Sir J. Robison on a, 1838, 37.
—— levellings in the Madras Presidency, Colonel Sykes on, 1847, 42.
—— registration, simultaneous, in the north of England, Prof. Phillips on, 1844, 21.
Barrande's (M.) labours in preparing his 'Silurian System' of Bohemia, review of, by Sir R. I. Murchison, 1850, 97.
Baryta, bicarbonate of, Prof. T. Andrews on its application to quantitative analyses, 1852, 41.
Barytes and platinum, cyanurets of, Sir D. Brewster on the optical properties of the, 1850, 5.
Basalt in the island of Mull, the Duke of Argyll on a fossiliferous deposit underlying, 1850, 70.
Basaltic dyke in the vale of Eden, J. A. Knipe on a, 1839, 67.
—— formations in Northumberland, W. S. Gibson on, 1859, 108.
Basins, tidal, on the formation of the

entrances to, by B. B. Stoney, 1857, 198.
Bath, oriental, Dr. E. Haughton on the, 1857, 110.
Bath waters, W. Herapath's analysis of the, 1836, 70.
Batteries, floating and fixed, G. Rennie on the construction of, 1858, 220.
——, galvanic, M. Kukla's, 1853, 44.
——, graphite, for telegraphic purposes, C. V. Walker on, 1852, 138.
Battery, hydro-electric chain, Pulvermacher's, W. H. Walenn on, 1851, 52.
——, gas, on a new form of the, by W. Symons, 1855, 15.
——, gas voltaic, W. R. Grove on experiments on the, 1845, 30.
——, small voltaic, of extraordinary energy, W. R. Grove on a, 1839, 36.
——, Maynooth cast-iron, on a modification of the, by W. Symons, 1856, 16.
Beach, raised, in the limestone cliff under the Hoe at Plymouth, Dr. E. Moore on the discovery of organic remains in the, 1841, 62.
Beaches, raised, in Cornwall and Devon, Mr. Bartlett on the, 1841, 61, 62.
Beams or girders, T. M. Gladstone on malleable iron for, 1852, 126.
——, iron, on the strength and best forms of, by Prof. E. Hodgkinson, 1831-32, 610.
——, on the effect of impact on, by Prof. E. Hodgkinson, 1833, 421.
Beans, legumin in, Prof. Liebig's experiments on the, 1841, 53.
Beaumont's (Elie de) theory of the parallelism of contemporaneous lines of elevation, Rev. W. D. Conybeare on its application to Great Britain and Ireland, 1831–32, 587.
Beauty, on the geometrical basis of, by R. D. Hay, 1850, 131.
Bedford Level, Rev. Prof. Sedgwick on the changes in the river drainage of the, 1845, 43.
Bee, common hive, Rev. H. H. Higgins on the death of the, supposed to be occasioned by a parasitic fungus, 1858, 124.
Bees, on their instinctive tendency to form hexagonal cells, by R. L. Ellis, 1858, 122.
——, on the formation of the cells of, by W. R. Tegetmeier, 1858, 132.
——, on the development of sex in, by Rev. W. Leitch, 1855, 111.
Beef, experiments on the preservation of, by G. Hamilton, 1854, 69.
Beekites found in the red conglomerates of Torbay, W. Pengelly on the, 1856, 74.
Beet-sugar manufacture in the United Kingdom, Prof. W. N. Hancock on the prospects of the, 1851, 100.
Beetle found imbedded in some artificial concrete, 1846, 82.
Beetles, mummy, J. O. Westwood on, 1840, 123.
Bellinurus, a subgenus of Limulus, W. H. Baily on, with descriptions of two new species (B. regina and B. arcuatus), 1858, 76.
Bellis perennis, Prof. Dickie on a monstrosity of, 1852, 66.
Ben Cruachan, W. Hopkins on the distribution of granite rocks from, 1851, 59.
Bennett and Penrose's sliding heliograph, 1852, 129.
Berber language, Prof. F. W. Newman on the Soukaneeah dialect of the, 1850, 142.
Berbers or Brabers, of Morocco, E. Schlagintweit on the, 1860, 177.
Bergmehl, or mountain meal, of Sweden, Prof. Ehrenberg on, 1838, 116.
Berkeleyan controversy, an attempt to solve some of the difficulties of the, by well-ascertained physiological and psychological facts, by Dr. R. Fowler, 1855, 123.
—— hypothesis, second physiological attempt to unravel some of the perplexities of the, by Dr. R. Fowler, 1859, 180.
Berkeley's (Bishop) 'New Theory of Vision,' Sir D. Brewster on, 1848, 49.
—— theory of vision, Sir D. Brewster on, 1849, 6.
Bernoulli's theory of gases as applied to their internal friction, their diffusion, and their conductivity for heat, Prof. Maxwell on the results of, 1860, 19.
—— theory of wind instruments, an experimental proof of, 1831-32, 559.
Beroë of the British seas, 1839, 85.
—— cucumis, and the genera or species of Ciliograda which have been founded upon it, Prof. E. Forbes on, 1849, 76.
—— pileus, R. Garner on, 1839, 93.
Berwick and North Durham coal-field, D. Milne on the, 1838, 76.
Berzelius, Dr. R. Hare on the chemical nomenclature of, 1836, 44.
Bicellaria Alderi, G. Busk on, 1859, 145.
Bichromate of potash, Prof. T. Thomson on the manufacture of, in Glasgow, 1840, 62.
Bicyanide with binoxide of mercury, Prof. Johnston on a new compound of, 1838, 59.
Bile, Dr. Kemp on the functions of the, 1844, 86.
——, Dr. Thudichum on the physiological relations of the colouring matter of the, 1860, 147.
Biliary concretions, Dr. De Vrij on, 1847, 59.
—— ducts, Dr. Olliffe on a peculiar disease of the, 1843, 79.
Bill circulation of Great Britain, Mr. Leatham on the, 1840, 184.
Binnen or inland lake, Dr. L. Becker's remarks as to the earlier existence of the, 1850, 73.
Binocular instruments, A. Claudet on the means of increasing the angle of, 1860, 61.
—— vision, and on the stereoscope by

illustrating its phenomena, Prof. Wheatstone on, 1838, 16.
Biology, on certain *à priori* principles of, by Prof. Alison, 1857, 109.
Biquaternions, Sir W. R. Hamilton on, 1852, 2.
Bird, gigantic, from the London clay of Sheppey, J. S. Bowerbank on the remains of a, 1851, 55.
——, gigantic, sculptured on the tomb of an officer of the household of Pharaoh, J. Bonomi on a, 1845, 63.
Birds, figures of, observed on a tomb at Memphis, by J. Bonomi, 1846, 79.
——, Prof. Strickland on a chart of the natural affinities of the Insessorial order of, 1843, 69.
——, on the arrangement of, by T. C. Eyton, 1858, 122.
——, British, J. Hogg on the classification of the genera of, 1846, 76.
——, on the variation of species, by Rev. L. Jenyns, 1856, 103.
——, catalogue of, observed in S.E. Durham and in N.W. Cleveland, by J. Hogg, 1844, 59.
—— of Yorkshire, T. Allis on the, 1844, 60.
—— of the north of Scotland, T. F. Jamieson on the, 1859, 150.
—— observed in Sutherlandshire, by P. J. Selby, 1834, 610.
—— of Corfu, the Ionian Islands and Crete, notice of Capt. Drummond's catalogues of, 1843, 70.
—— of the Faroe islands, J. Wolley on the, 1850, 127.
——, Col. Sykes on the geographical range of, 1835, 69.
——, on a curious exemplification of instinct in, by Rev. F. F. Statham, 1853, 71.
—— T. Allis on some peculiarities in the flight of, 1844, 72.
——, on the migration of, by Dr. Cuthbert Collingwood, 1858, 121.
——, on the orbital glands in, by P. J. Selby, 1834, 609.
——, on the muscles of the extremities of, by Prof. C. J. Sundevall, 1855, 137.
——, on some traces of harmonious colours in, by Rev. Prof. M'Cosh, 1854, 101.
——, new pheasants introduced into England, 1859, 148.
——, notice of new species of hummingbirds from the Andes, by J. Gould, 1846, 76.
—— of Paradise, notice of several species of, by J. Gould, 1859, 148.
——, periodical, observed near Llanrwst, Denbighshire, in the years 1842 and 1843, 1843, 69.
——, periodical, observed near Llanrwst, in the years 1843 and 1844, 1844, 61.
——, periodical, observed near Llanrwst, in the years 1844 and 1845, 1845, 63.
——, periodical, observed near Llanrwst, in the years 1846 and 1847, 1847, 75.
Birds, Prof. Strickland on the history of the Dodo and other allied species of, 1847, 79.
Birley Spa, Hackenthorp, on the waters of, 1844, 105.
Births, Dr. Collins on the periodicity of, 1836, 146.
——, deaths, and marriages, on the fluctuations in the number of, in the metropolis during 15 years, by Dr. W. A. Guy, 1857, 167.
Bismuth, found near Truro, 1841, 59.
——, crystallised, Prof. Matteucci on the magnetism of rotation in masses of, 1853, 6.
Bitter principles of some vegetables, Prof. Peretti on the, 1844, 84.
Blast of very high temperature, E. Cowper on a new mode of obtaining a, 1860, 204.
—— furnace, Mr. Player on the application of anthracite coal to the, 1839, 130.
—— furnaces, on the advantageous use made of the gaseous escape from, 1850, 172.
Blasting of rocks, Dr. Hare on, 1836, 45.
—— and quarrying of rocks, W. Sim on the, 1855, 209.
Bleaching, influence of sunlight over the action of the dry gases on organic colours, Dr. G. Wilson on the, 1850, 65.
—— powder, or chloride of lime, Prof. T. Thomson on its manufacture in Glasgow, 1840, 59.
—— powder and other hypochlorites, Dr. A. P. Price on a method for determining the available amount of chlorine in, 1853, 48.
Blenheim iron ore, E. Hull on the, 1860, 81.
Blind, Rev. W. Taylor's explanation of Mr. Littledale's apparatus for the, 1844, 99.
——, deaf, and dumb, Dr. Fowler on cases of, 1841, 81; 1847, 92.
——, deaf, and dumb, a physiological explanation of how they interpret the communications of others by touch only, by Dr. Fowler, 1848, 88.
Blindness, when caused by sulphuric acid, curable, 1840, 84.
——, moon, on, 1858, 19.
Blood, human, Prof. Buchanan on separating, by filtration, the coagulable lymph from, 1840, 75.
——, human, Dr. Buchanan on the fibrin of, 1840, 76, 156.
——, human, microscopic observations on its movement in the capillaries, and on the structure of the nerves in the glands of the tongue, by Dr. A. Waller, 1848, 83.
——, Dr. Searle on the cause of its circulation through the liver, 1846, 93.
——, on the mechanism by which it may

be accelerated or retarded in the arterial and venous systems of Mammalia, by Dr. T. J. Aitkin, 1834, 681.
Blood, Dr. R. Fowler on the influence of its circulation on the mental functions, 1853, 66.
——, on the cause of the fluidity of the, by Dr. B. W. Richardson, 1856, 98.
——, Prof. Mulder on the presence of carbonates in, 1850, 57.
——, R. H. Brett on the albuminous principles existing in the, 1837, 125.
——, on the physiological action of inorganic substances introduced directly into the, 1853, 66.
—— in the head, Dr. Carson on the motion of the, and on the uses of the ventricles and convolutions of the brain, 1837, 123.
——, in erysipelas, J. Goodman on the physiological condition of the, 1847, 94.
—— of Amphioxus lanceolatus, Prof. Huxley on the corpuscles of the, 1847, 95.
Blood-corpuscle, coloured, J. S. Sanderson on the supposed relation of the spleen to the origin of the, 1850, 134.
Blood-corpuscles, on certain pathological characters of the, by J. P. Hennessy, 1857, 113.
——, Dr. Gladstone on a sample of, containing fat, 1851, 77.
——, Dr. G. Wilson on fluorine in, 1850, 67.
——, Dr. Houston on the circulation of the, in acardiac fœtuses, 1843, 81.
——, Dr. J. Blake on the physiological action of inorganic substances introduced directly into the, 1853, 66.
Blood-vessels of the porpoise, Dr. Sharpey on the anatomy of the, 1834, 682.
Blowpipe, oxyhydrogen, on a safety tube adapted to the, 1831–32, 577.
——, common bellows, W. Ettrick on a modification of the, 1836, 77.
Boats, Mr. Smith on propelling, on canals, 1840, 209; 1844, 98.
——, Dr. J. Phipps on the sailing powers of two, built on the wave principle, 1846, 112.
—— for inland navigation, Prof. Hennessy on, 1860, 212.
Bobbin net trade, W. Felkin on the, 1836, 148.
Bode's (Baron de) insulated compass, J. Y. Oliver on, 1845, 16.
Bodies, floating, M. Davidow on the theory of equilibrium of, 1847, 1.
——, imperfectly elastic, Prof. E. Hodgkinson on the collision of, 1834, 543.
——, liquid and solid, Prof. W. J. M. Rankine on the velocity of sound in, 1851, 4.
——, solid, Prof. Hodgkinson's experimental inquiries into the falling-off from perfect elasticity in, 1844, 25.
Bofareira (Ricinus communis), Dr. M'William on the use of, as a means to excite lactation, adopted by the natives of the Cape de Verd Islands, 1850, 132.
Bog-butter, Irish, J. S. Brazier on, 1852, 35.
Bog-timber, Archdeacon Vignoles on, 1835, 76.
Boiler, cylindrical spiral, J. Elder on the, 1860, 204.
—— explosions, on the prevention of, by H. Dircks, 1854, 149.
Boilers, W. Fairbairn on the construction of, 1851, 113.
——, locomotive, and others, Mr. Hawthorn on, 1840, 211.
—— of steam-engines, Dr. J. Davy on the incrustation which forms in the, 1850, 51.
—— of steam-engines, W. S. Ward on a method of supplying them with water, 1849, 132.
——, steam-engine, G. Gurney on explosions in, 1841, 49.
——, tubular, new, W. Fairbairn on a, 1852, 125.
——, W. Froude on Giffard's injector for feeding, 1860, 211.
Bolina hibernica, R. Patterson on, 1839, 85.
Bombaceæ (or silk-trees) of Western India, Dr. G. Buist on some peculiarities of the, 1859, 132.
Bombax malabaricum of Western India, Dr. Buist on, 1859, 132.
Bombyx mori, on its occurrence in a wild state in this country, by Rev. F. F. Statham, 1858, 130.
Bonapartea, and other plants, for furnishing fibre for paper-pulp, Chevalier de Claussen on, 1855, 104.
Bone, J. Douglas on its reproduction after the operation of trepan, 1840, 165.
——, diseased, Prof. Syme on the excision of, 1834, 684.
Bone and cartilage, P. Redfern on the connexion between, 1853, 71.
—— and osseous grafts, M. Ollier on the artificial production of, 1860, 143.
Bone-ash, on the commercial analysis of, by Prof. Voelcker, 1858, 68.
Bone-bed of Aust Cliff, large cylindrical bone found in the, 1849, 67.
Bone-beds of the upper Ludlow rock, and base of the old red sandstone, Sir R. I. Murchison on the, 1856, 70.
Bone-cave at Cefn in Denbighshire, J. E. Bowman on the, 1836, 88.
—— at Cheddar, Mr. Long on a, 1838, 85.
—— near Montrose, W. Beattie on a, 1859, 99.
Bone-caves near Tenby, Rev. G. N. Smith on three undescribed, 1860, 101.
Bone-oil, on the products of, by Dr. T. Anderson, 1851, 43.
Bones, human, discovered in a field near Billingham, 1848, 95.
——, J. Bryce on some caverns near the Giant's Causeway containing, 1834, 658.

Bones of the Megatherium, symmetrical relations of the, 1833, 437.
——, on the constitution of the mineral portion of, and the analysis of common bone-ash, animal charcoal, &c., by Prof. Voelcker, 1858, 68.
Books, J. I. Hawkins on folding plates in, for the pocket, 1839, 132.
—— and MSS., on a method of destroying insects which attack them, 1837, 99.
Boracic acid and ammonia, R. Warington on the production of, by volcanic action, 1854, 76.
Boracite, amorphous, Dr. Karsten on an, 1847, 55.
Boring for Artesian springs, M. Fauvelle on a new method of, 1846, 105.
Boron, Dr. Frankland on a new organic compound containing, 1860, 69.
Botanic Garden at Kew, R. Hunt on the coloured glass of the Palm-house in the, 1847, 51.
Botanical Garden of the Royal Agricultural College, Prof. Buckman on experiments in the, 1856, 83.
—— geography of part of the Himalaya and Tibet, Major Madden and Capt. Strachey on the, 1851, 72; of western Tibet, 73.
Botany, on some practical results derivable from the study of, by N. B. Ward, 1858, 118.
——, on the originary structure of the flower, by Prof. Agardh, 1833, 433.
——, systematic, J. Ball on practical means for the advancement of, 1845, 72.
—— and Zoology, Prof. Strickland on the true method of discovering the natural system in, 1840, 128.
Boulder-clay formation in Northumberland, W. S. Gibson on the, 1859, 109.
Boulder of cannel coal in a vein of common bituminous coal, 1848, 64.
—— of granite in the white chalk, R. Godwin-Austen on a, 1857, 62.
Boulders, J. T. Clay on their occurrence in the valley of the Calder, 1842, 55.
——, R. Griffith on their distribution in Ireland, 1843, 40.
——, Prof. Phillips on the removal of, from the Cumbrian mountains, 1836, 87.
——, Rev. T. Rankin on the formation of, 1853, 54.
Boyne, J. Barton on the viaduct over the, 1857, 178.
Brachiopoda, on the anatomy of the, by A. Hancock, 1856, 94.
—— observed in a dredging tour with Mr. M'Andrew on the coast of Norway, L. Barrett on the, 1855, 106.
Brachyacanthus scutiger, a new genus and species, from the lower old red sandstone, 1859, 116.
Brachyura, male, C. Spence Bate on the use of the false feet in, 1850, 116.
Bradypus didactylus, Prof. Owen on the tooth of, 1838, 145.
Brahmins of India, H. Schlagintweit on the, 1857, 151.
Bráhui, Dr. Latham on the ethnological position of the, 1851, 89.
Brain, Dr. Carson on the uses of the ventricles and convolutions of the, 1837, 123.
——, Dr. Evanson on the functions of the, 1837, 108.
——, Dr. Foville on the anatomy of the, 1839, 97.
——, R. Garner on the anatomy of the, in some small quadrupeds, 1858, 123.
——, Dr. Hutton on a case of deficient development of the right hemisphere of the, 1835, 99.
——, Dr. Laycock on the reflex function of the, 1844, 85.
——, Dr. Laycock on the communicating fibres of the, in reference to thought and action, 1845, 84.
——, Dr. Macartney on the structure of the, 1833, 449.
——, Dr. Prichard on diseases of the, 1836, 107.
——, on the explanation of the crossed influence of the, by Dr. J. Struthers, 1855, 136.
—— of the Troglodytes niger, Prof. Allen Thomson on the, 1855, 139.
Branchipus (Schæffer) and Chirocephalus (Prevost), Dr. Baird on the genera, 1847, 74.
Brass, magnetized, Rev. T. Rankin on, 1849, 29.
——, on the chemical composition of some iron ores called, by E. C. Nicholson and D. S. Price, 1855, 66.
—— and copper filings, &c., application of electro-magnetism for the separation of iron from, 1835, 20.
Brassica oleracea, Dr. Lankester on some abnormal forms of the fruit of, 1849, 71.
Bread, on the composition of, 1855, 66.
——, new mode of making, 1855, 64.
——, on a new mode of making, by Dr. W. Odling, 1859, 76.
——, on the effects of alum in making, by Dr. Odling, 1857, 55.
——, ropy, observations on, by G. Read, 1850, 60.
Breakwater, Plymouth, Wm. Stuart on the, 1841, 99.
——, floating, Capt. Taylor on a, 1841, 100.
Breakwaters, C. Vignoles on the use of béton and concrete in constructing, 1842, 112.
Bream, white, Dr. Lankester on the, 1839, 94.
Breccias of the southern portion of the valley of the Nith, Scotland, Prof. Harkness on the origin of the, 1858, 81.
Brewing, W. Black on the influence of electricity on the process of, 1837, 58.
Brick and tile machine, the Marquis of Tweedale's patent, G. Cottam on, 1839, 128.

Bridge of Ashiesteel, rubble, J. Smith on the, 1850, 187.
——, flexible suspension, W. J. Curtis on a, 1837, 132.
——, suspension, of steel, over an arm of the Danube at Vienna, 1831–32, 608.
——, suspension, over the Avon, T. Motley on a, 1838, 157.
——, tubular, on the priority of the invention of, 1850, 170.
——, tubular, proposed by Mr. Stephenson, for crossing the Menai Straits, W. Fairbairn's experiments on the, 1846, 107; Prof. Hodgkinson's experiments on the, 108.
Bridges, J. Barton on the calculation of strains in lattice girders, 1852, 123.
——, oblique, P. Nicholson on, 1838, 152.
——, suspension, J. M. Rendel on a system of trussing for the roadways of, 1841, 102.
——, timber, B. Green on constructing, 1838, 150.
——, timber, in special reference to railways, Mr. Vignoles on, 1840, 195; Mr. Mitchell on, 197.
Brine-spring, carbonic acid gas emitted by a, 1838, 28.
British Association Catalogue of Stars, W. S. Jacob's notes on the, 1854, 25.
British Channel, G. Roberts on a remarkable tide in the, 1848, 37.
—— isles, A. Petermann on the hydrography of the, 1848, 73.
—— seas, R. M'Andrew on some animals new to the, 1844, 64.
—— flora, additions to the, 1848, 84.
Britons, ancient, on the forms of the crania of the, by J. B. Davis, 1854, 127.
Bromine, on the equivalent of, by Dr. W. Wallace, 1859, 88.
—— and chlorine, on the allotropic modifications of, analogous to the ozone from oxygen, by Dr. T. Andrews, 1855, 48.
—— and its compounds, Dr. Glover on the physiological and medicinal action of, 1840, 157.
Bronchial tubes, J. Carson on the uses of the muscular fibres of the, 1842, 80.
Brorson's comet of short period, Dr. Von Galen on, 1851, 23.
Brougham's (Lord) experiments on light, remarks on, by Rev. Prof. Powell, 1851, 11.
Brucia, on testing for, by J. Horsley, 1856, 53; on a new method of extracting it from nux vomica without alcohol, 54.
'Bruit de soufflet,' Dr. Corrigan on the mechanism of, 1835, 87.
Bryarea scolopendra, found in Dublin Bay, R. Ball's notice of, 1849, 72.
Bryozoa, marine, Rev. T. Hincks on a peculiar organ which occurs on some of the, 1852, 75.
——, Prof. Allman on the nervous system and certain other points in the anatomy of the, 1849, 71.
Bryozoon, freshwater, new, Prof. Allman on a, 1849, 72.
Bubalus moschatus (fossil musk-ox), from the Wiltshire drift, Prof. Owen on additional evidence of the, 1856, 72.
Buccinum, J. Lubbock on the development of, 1860, 139.
Buildings, construction of, for the accommodation of audiences, 1844, 99.
——, J. Scott Russell on the application of our knowledge of the laws of sound to the construction of, 1843, 96.
——, public, Dr. Reid on the construction of, in reference to sound, 1835, 14.
——, public, Mr. Shand on peculiarities with regard to sound in, 1840, 52.
Bunter sandstone of Dumfriesshire, Prof. Harkness on the position of the footsteps in the, 1850, 83.
Buoy, Gresham, for recording the loss of missing ships at sea, J. Gresham on the, 1858, 219.
Burdie House limestone, D. Page on the, 1855, 91.
Bursaria, Prof. Allman on the structure of, 1853, 65.
—— leuca, Prof. Allman on the occurrence of peculiar organs resembling thread-cells in, 1854, 105.
Butterflies, British, on the distribution of, by H. T. Stainton, 1859, 156.
Butter-tree of Africa, notice of the, 1846, 90.
Buttneriaceæ, Sir R. Schomburgk on Lightia lemniscata, a new genus of, 1844, 71.
Butyro-limnodic acid, J. S. Brazier on, 1852, 35.

Cable, Atlantic, on diminishing the strain by an elastic regulator, by C. Brooke, 1857, 180.
——, electric, on the discharge of a coiled, by Prof. W. Thomson, 1859, 26.
Cables, electric, on the submersion of, by J. Maclean, 1858, 215.
——, long submarine, on the retardation of signals through, by F. Jenkin, 1859, 251.
——, submarine telegraphic, H. Conybeare on apparatus for laying down, 1858, 209.
——, telegraphic, on constructing and laying, by J. Mackintosh, 1858, 214.
Cadmacetite, on the optical properties of, by W. Haidinger, 1855, 11.
Cæcoidæ, on peculiarities of growth in, by P. P. Carpenter, 1857, 108.
Cale-spar, on rings seen in viewing a light through fibrous specimens of, 1860, 19.
Calcareous spar, unequal expansion of, when heated, 1837, 44.
Calceola sandalina, a British fossil, 1890, 69.

Calcium, fluoride of, Dr. G. Wilson on the extent to which it is soluble in water at 60° F., 1846, 38; 1850, 68.
——, pentasulphate of, as a means of preventing and destroying the grape disease, 1853, 46.
—— and strontium prepared in the form of metallic reguli, by Dr. Matthiessen, 1855, 66.
Calculating instrument invented by M. Slonimski, H. Knight on a, 1849, 118.
—— machine, Colmar's, 1854, 1.
—— machine, Fowler's, 1840, 55; 1841, 39.
—— machine, Rev. H. Moseley's, 1841, 35.
—— machine, Messrs. Scheütz's, H. P. Babbage on mechanical notation as exemplified in, 1855, 203.
Calculi, Dr. Houston on M'Clean's instrument for the removal of, 1843, 81.
Calculus, cases of, treated by lithotrity, Dr. Costello on, 1839, 109.
Calculus, Icosian, Sir W. R. Hamilton on the, 1857, 3.
——, integral, H. F. Talbot on the, 1836, 1.
—— of principal relations, Sir W. R. Hamilton on the, 1836, 4, 41.
—— of differences, Sir W. R. Hamilton on a theorem in the, 1843, 2.
—— of probabilities, Sir W. R. Hamilton on some investigations connected with the, 1848, 3.
—— of variations, Prof. Lindelöf on the, 1859, 5.
Caledonians, on the ethnology and hieroglyphics of the, by Col. J. Forbes, 1859, 178.
Calico, Mr. Mercer on a method of contracting the fibres of, and of obtaining on it thus prepared, colours of much brilliancy, 1851, 51.
Calico-printing, on the ageing of mordants in, by Walter Crum, 1859, 258.
Callidium bajulum, Rev. L. Jenyns on timber attacked by the larvæ of, 1847, 85.
Calliopœa, species of, discovered in Britain, 1843, 73.
Callitriche, Dr. Lankester on the epidermal appendages of the genus, 1850, 113.
Calorific effects of magneto-electricity, J. P. Joule on the, 1843, 33.
Calorimeter, new, Dr. Ure on a, 1839, 20.
Calorimotor for igniting gases in eudiometrical experiments, and gunpowder in rock-blasting, Dr. Hare on a, 1836, 45.
Calothrix nivea, Dr. Lankester on the occurrence of, at Cove, Ireland, 1843, 77.
Calotypes, Sir D. Brewster on an improvement in the method of taking, 1845, 10.
Calurus pesuvianus, 1837, 97.
Calycophyllum Stanleyanum, Sir R. Schomburgk on the, 1844, 71.
Cambrian rocks of Bray Head and Howth, on the zoological relations of the, by Prof. Kinahan, 1857, 75.
Cambrian rocks of the Longmynd, on some fossils from the, by J. W. Salter, 1855, 95.
—— and Silurian systems, Rev. Prof. Sedgwick and Sir R. I. Murchison on the, 1835, 59.
Cambridge University, statistics of, 1838, 170.
Camera, photographic, improvement in the, by Sir D. Brewster, 1849, 5.
——, binocular, Sir D. Brewster on a, 1849, 5.
——, binocular, manifold, A. Claudet on a, 1852, 6.
—— obscura and other apparatus used in making daguerreotype drawings, Sir D. Brewster's account of the, 1840, 9.
——, Sir D. Brewster on the size of the lens, 1852, 5.
——, solar, A. Claudet on the principles of the, 1860, 62.
Camp, Roman, at Ardoch, Col. Sir H. James on the, 1859, 183.
Campanularia fastigiata, a new zoophyte, J. Alder on, 1859, 142.
Camphor, solid and liquid, from the Dryobalanops camphora, Dr. De Vrij on, 1851, 52.
Canal through the Isthmus of Suez, on the proposed, 1857, 199.
—— lock, new, Mr. Smith on a, 1840, 210.
Canals, Mr. Smith on propelling boats on, 1840, 209; 1844, 98.
——, Prof. Kelland on the motion of a wave in, 1840, 51.
——, T. Birmingham on the advantages of turning them into railways, 1844, 97.
Cancerous diseases, R. Carmichael on, 1836, 112.
Candles, made of the oily secretion of the Shea butter-tree of Africa, 1846, 90.
Canis jubatus of South America, Col. Sykes on, 1838, 104.
Canna indica, W. T. Iliff's experiments on the roots of the, as to their value in an economical point of view, 1847, 85.
Cannon, on the bursting of, by S. Smith, 1858, 221.
——, rifled, Capt. Blakeley on, 1860, 201.
Canoes, ancient, found at Glasgow, J. Buchanan on, 1855, 80.
Caoutchouc, liquid, on some peculiarities discovered in, by Prof. Archer, 1854, 96.
——, Prof. Royle on, 1836, 105.
——, W. Brockedon on vulcanized, 1846, 113.
Capillary attraction, instrument to illustrate the effects of, 1831–32, 85.
Carbazotic acid, Prof. F. C. Calvert on the physiological properties of, 1854, 65.
Carbon, atomic weight of, 1839, 49.
——, H. C. Sorby on the tetramorphism of, 1850, 62.
——, B. Rigg on the formation or secretion of, by animals, 1844, 33.

Carbon, Rev. T. Exley on the specific gravity of the vapour of, 1838, 64.
—— and hydrogen, Prof. E. Davy on a new gaseous compound of, 1837, 50.
—— and hydrogen, W. Maugham on a new compound of, 1838, 72.
—— and iron, Dr. Bromeis on the compounds of, 1842, 34.
—— and potassium, Prof. E. Davy on a compound of, 1836, 63.
Carbonate of ammonia, commercial, Mr. Scanlan on the constitution of, 1838, 63.
—— of zinc, R. W. Fox on the production of a horizontal vein of, 1838, 90.
Carbonates, alkaline, Prof. Draper on their decomposition by the light of the sun, 1843, 33.
—— in blood, Prof. Mulder on the presence of, 1850, 57.
Carbonic acid, Dr. Dalton on its non-production by plants, 1837, 58.
—— acid, R. Addams on solidifying, 1838, 70.
—— acid in the atmosphere, H. H. Watson on the quantity of, 1834, 583.
—— acid thrown off from the lungs, Mr. M'Gregor's experiments on, 1840, 87.
—— acid gas, Prof. Draper on the decomposition of, and the alkaline carbonates, by the light of the sun, 1843, 33.
—— acid gas in deteriorated atmospheres, C. T. Coathupe on apparatus for determining the quantity of, 1839, 63.
—— acid gas emitted by a brine-spring, Prof. Forbes on, 1838, 28.
Carboniferous and Devonian systems of Westphalia, Sir R. I. Murchison on the, 1839, 72.
—— and oolitic systems in Yorkshire, peculiar character of, 1831–32, 56.
—— deposits of France and Germany, Sir R. I. Murchison on lines of dislocation between the lower and upper, 1850, 96.
—— limestone, lower, in the neighbourhood of Cork, Prof. Harkness on the jointing and dolomitization of the, 1857, 68.
—— limestone fossils from the county of Limerick, W. H. Baily on, 1857, 62.
—— series of Ireland, Sir R. Griffith on the lower members of the, 1852, 46.
—— series of Ireland, on the relations of the rocks at or below the base of the, by Sir R. Griffith, 1857, 66.
—— system of Russia, Sir R. I. Murchison on the, 1840, 107.
Carburets, metallic, Dr. Brown on the artificial crystallization of, 1839, 39.
Carcharias megalodon of the red crag, J. S. Bowerbank on the dimensions of, 1851, 54.
—— megalodon, Prof. Owen on the teeth of, 1838, 141.
Cardamine sylvatica (Link) new to the English flora, 1839, 92.
Cardinia (Agassiz), H. E. Strickland on the genus, as characteristic of the lias formation, 1841, 65.
Cardium edule (common cockle), on the composition of the shell of, by Dr. T. L. Phipson, 1859, 77.
Cardona salt-mine, on the, 1837, 72.
Carduus setosus, British, 1844, 72.
Carocolla filomarginata, 1837, 100.
Carriages, J. Buchanan on a new locking apparatus for, 1844, 98.
Carrot, wild, on the varieties of the, by Prof. E. Forbes, 1849, 70.
Cartesian theory of analytic geometry, A. J. Ellis on the, 1855, 5.
Cartilage and bone, P. Redfern on the connexion between, 1853, 71.
Caryophyllin, Dr. L. Playfair on the composition and characters of, 1842, 36.
Casein, on, and a method of determining sulphur and phosphorus in organic compounds in one operation, by Prof. Voelcker, 1855, 73.
——, on the comparative action of hydrocyanic acid on albumen and, by A. Gages, 1859, 162.
Catalepsy, irregular intermittent tetanic, Dr. W. Camps on a case of, 1855, 121.
Catalytic action, J. Mercer on some peculiar instances of (so called), 1842, 32.
Cataract, Sir D. Brewster on the cause, prevention, and cure of, 1836, 111.
——, capsular, R. Middlemore on the treatment of, 1839, 96.
Catenicella, observations on the genus, by G. Busk, 1850, 118.
Caterpillars, J. Dennistoun on a tissue spun by, 1850, 123.
Cattle, wild, of Chillingham Park, J. Hindmarsh on the, 1838, 100.
Caustic, Dr. R. D. Thomson on nitrate of silver as a, 1838, 132.
—— potass, R. Mallet on the chemical action of light on, 1838, 61.
Caustics produced by reflexion, Prof. Lindelöf on the, 1860, 14.
—— produced by two mirrors in rotation, Prof. Anderson on the, 1845, 9.
Cavendish's experiment respecting the production of nitric acid, Dr. Daubeny on, 1846, 38.
Caverns in the island of Rathlin and adjoining coast of Antrim, T. Andrews on, 1834, 660.
—— in the various limestone rocks of Canada, Dr. G. D. Gibb on the, 1859, 106.
—— of Pommier, San Domingo, Sir R. Schomburgk on the picture-writings of the, 1851, 90.
—— containing bones, near the Giant's Causeway, J. Bryce on, 1834, 658.
——, ossiferous, at Oreston, near Plymouth, W. Pengelly on the, 1859, 121.
——, ossiferous, at Oreston, on the origin of the, by H. C. Hodge, 1859, 110.

Caves in the valley of Mitchelstown, notes of a visit to, by Dr. E. P. Wright, 1857, 108.
Cecidomyia tritici, Rev. Prof. Henslow on, 1841, 72.
Cell-development, pathological, Dr. Gairdner on, 1850, 131.
Cells, Prof. Henfrey on the development of, 1846, 90.
——, on the physiology of, in relation to consciousness and adaptive movements, by Dr. T. Laycock, 1854, 110.
——, epidermal, of the petals of plants, T. West on the, 1858, 119.
——, epithelial, of the small intestines, on a peculiar structure discovered in the, by Prof. Kölliker, 1855, 126.
——, ferment-, in the warm-water flax steep, Prof. Allman on the development of, 1852, 64.
—— of plants, Dr. Allman on the mathematical relations of the forms of the, 1835, 79.
Cellular matter or "woody fibre" in vegetable food-stuffs, T. Segelcke on the current methods for estimating the, 1859, 79.
Celtæ in Scotland, D. Wilson on the evidence of the existence of primitive races prior to the, 1850, 142.
Cement, metallic, from iron ore, Mr. Mushet on, 1836, 65.
Census of Great Britain in 1851, E. Cheshire on the results of the, 1853, 98.
Centaurea nigra and C. nigrescens, Rev. Prof. Henslow on the specific identity of, 1856, 87.
Centrifugal pump, J. G. Appold on a, 1849, 110.
Cephalaspis, fossil, Prof. Jameson on the, 1834, 646.
Ceratopteris thalictroides, Prof. Allman on a peculiarity in the structure of the stomata of, 1847, 81.
Cerealia and other edibles of India and England, prices of the, compared, by Col. Sykes, 1847, 107.
Cerebellum, H. Carlile on remarkable malformations of the, 1837, 113.
Cerebral nerves, Dr. M. Hall and Mr. Broughton on the sensibilities of the, 1836, 125.
Cerium, Prof. Mosander's experiments on, 1843, 25.
Cesspools, on the alkaline emanations from, by Dr. Odling, 1856, 57.
Cetacea, Dr. A. Jacob on the mammary glands in the, 1835, 86.
Cevadilla (Veratrum officinale, Schiede), Dr. Schiede on, 1835, 77.
Chabasie, Prof. Johnston on the cause of the optical properties of, 1835, 44.
Chalcedony, on a remarkable specimen of, by Sir D. Brewster, 1859, 245.
Chalk, Rev. Dr. Buckland on the action of acidulated waters on the surface of the, 1839, 76.
Chalk formation, on the origin of siliceous deposits in the, by J. S. Bowerbank, 1856, 63.
—— of the valley of the Seine in Normandy, Sir C. Lyell on ancient sea-cliffs and needles in the, 1840, 111.
——, white, of the S.E. of England, R. Godwin-Austen on the occurrence of a boulder of granite in the, 1857, 62.
——, on the forms of Diatomaceæ found in, by Rev. E. O'Meara, 1857, 97.
—— flints and oolitic fossils from the boulder-clay in Caithness, on, 1850, 93.
Chameleon, on the habits and instincts of the, by W. E. C. Nourse, 1859, 153.
Channels, chock, Captain Couch's, Sir W. S. Harris on, 1841, 102.
Charcoal, Dr. G. Bird on poisoning by the vapours of burning, 1839, 101.
——, animal, on the commercial analysis of, by Prof. Voelcker, 1858, 68.
——, mineral, Prof. Harkness on, 1854, 86.
Charitable institutions and workhouses, aphoristic notes on sanitary statistics of, by Dr. Roth, 1856, 149.
Charities, public, in London, J. Fletcher's historical account of the ancient system of, 1845, 88.
Charts of declination, magnetic, S. Beswick on a method for computing, 1850, 3.
—— of the stars, &c., on the application of Col. Sir H. James's geometrical projection of two-thirds of the sphere to the construction of, 1859, 183.
——, wind and current, of the North Atlantic, Lieut. Maury on, 1848, 34.
Cheese, Prof. Voelcker on poisonous metals in, 1860, 73.
Cheirotherium, on its footsteps in the stone quarries of Storeton Hill, 1838, 85.
Chemical abacus, notice of a, 1839, 65.
—— action, Dr. Andrews on the influence of voltaic combination on, 1838, 69.
—— action, restrained, E. A. Parnell on, 1841, 51.
—— action, of the dry gases, effect of sunlight in modifying the, 1850, 65.
—— action of the solar rays, Sir J. F. W. Herschel on the, 1839, 9.
—— action, R. Hunt on the influence of light in preventing, 1848, 54.
—— action of light, photochemical researches with reference to the laws of, by Prof. Bunsen and Prof. Roscoe, 1855, 48.
—— affinity, Rev. T. Exley on, 1844, 39.
—— cause of change in the composition of rocks, Prof. Johnston on a, 1853, 52.
—— changes produced by the solar rays, R. Hunt on the, 1845, 29.
—— character of steel, 1848, 57.
—— combination, Dr. T. Woods on, and on the amount of heat produced by the

combination of several metals with oxygen, 1852, 39.
Chemical combinations, R. Hunt on the influence of light on, 1843, 35.
—— combinations, Rev. T. Exley on the laws of, 1838, '68; 1848, 50.
—— composition, Dr. Schafhaeutl on the relation of form to, 1840, 65.
—— composition of brittle cast iron, Prof. W. A. Miller on the, 1848, 55.
—— composition of the waters of the Clyde, Dr. S. Macadam on the, 1855, 64.
—— composition of some iron ores called "brass," E. C. Nicholson and Dr. D. S. Price on the, 1855, 66.
—— composition of some minerals from Norway, by D. Forbes, 1854, 67.
—— compound, new, Dr. Apjohn on a, 1837, 48.
—— compounds in the gaseous form, table of, 1838, 65, 66, 67.
—— compounds, R. Hunt on the influence of light on, 1844, 35.
—— compounds, table of the varieties of, with their elements and specific gravities in the form of gas or vapour, 1838, 53.
—— elements, J. J. Coleman on some remarkable relations existing between the atomic weights, atomic volumes, and properties of the, 1860, 66.
—— equivalents, Prof. Stevelly on the application of a vernier to Wollaston's scale of, 1834, 596.
—— examination of some alloys of copper and zinc, by D. Forbes, 1854, 67.
—— experiments, by Dr. Hare, 1838, 39.
—— facts connected with the tessellated pavements at Cirencester, Prof. Buckman on some, 1850, 48.
—— families, J. Mercer on the relation of the atomic weights of the elements of, 1858, 57; on the atomic weights of the elements of six families, 59–63.
—— geology, T. S. Hunt on some points in, 1860, 83.
—— inquiries, Rev. Prof. Powell on apparatus for applying circular polarization to, 1842, 32.
—— manufactures of Glasgow, Prof. T. Thomson on the, 1840, 58.
—— nomenclature of Berzelius, Dr. R. Hare on the, 1836, 44.
—— philosophy, N. S. Maskelyne on the bearings of photography on, 1847, 56.
—— photometer, new, M. Niépce on a, 1859, 260.
—— principles involved in the rotation of crops, Dr. Daubeny on the, 1845, 33.
—— products, new, G. Lowe on, 1834, 582.
—— processes, Prof. F. Barker on some, 1835, 52.
—— symbols, Dr. Dalton on, 1836, 77.
—— theory of volcanic phenomena, Dr. Daubeny on the, 1836, 81.
—— constitution of the Humber deposits, J. D. Sollitt on the, 1853, 49.
Chemical and medicinal properties of carbonized peat moss, J. W. Rogers on the, 1857, 58.
Chemistry, Rev. T. Exley on important facts obtained mathematically in, 1836, 50.
——, agricultural, in relation to the mineral theory of Baron Liebig, J. B. Lawes and Dr. J. H. Gilbert on, 1851, 45.
——, agricultural, on some points connected with, by J. B. Lawes and Dr. J. H. Gilbert, 1856, 172.
——, agricultural, experiments on, by Dr. Daubeny, 1847, 82.
—— of fœtal life, Prof. Schlossberger on the, 1855, 135.
——, organic, Dr. Kemp on a natural system of, 1845, 31.
Chemnitzia rufescens, Prof. Forbes on, 1845, 66.
Chest, A. Maclaren on the influence of exercise on the expansion of the, 1860, 142.
Chick in ovo, on some discoveries relative to the, by F. R. Horner, 1853, 68.
Children, Dr. Duncan on a peculiar form of epidemic affecting the teeth and gums of, 1845, 82.
——, Mr. Wigglesworth on the mortality of, 1846, 100.
Chimæra, Prof. Owen on the tooth of the, 1838, 140.
Chimneys, on a lightning conductor for, by J. Nasmyth, 1854, 158.
Chinese arithmetic, on, 1852, 1.
—— astronomy, J. B. Lindsay on, 1859, 35.
—— and Indo-Chinese nation, Dr. Latham on the ethnography of the, 1845, 77.
Chirocephalus (Prevost) and Branchipus (Schæffer), Dr. Baird on, 1847, 74.
Chloride of calcium, gradual reduction of hydrate of cresyl into hydrate of phenyl and other compounds through the agency of, by Dr. Gladstone, 1860, 69.
—— of copper, basic, Dr. G. Bird on the artificial formation of, 1838, 56.
—— of lime, Prof. T. Thomson on its manufacture in Glasgow, 1840, 59.
—— of soda, Dr. Graves on its use in fever, 1835, 104.
—— of sodium and nitrate of baryta, when equivalent proportions of, are mixed together in solution and diffused, four salts exist contemporaneously in the liquid, by Dr. Gladstone, 1860, 69.
Chlorine, Dr. A. P. Price on determining the amount of, contained in hypochlorites of lime, soda, or potash, 1853, 48.
——, Rev. T. Exley on the specific gravity of, 1838, 64.
Chloro-arsenious acid and some of its compounds, Dr. W. Wallace on, 1858, 69.
Chloroform, Dr. C. Kidd on the nature of death from, 1860, 136.

Chloroform, notice of an instrument for the local application of, 1857, 115.
——, on a new method of administering, by M. le Baron Heurteloup, 1857, 51.
Choanites Königi (fossil sponge), W. Cunnington on a peculiarity in the structure of the, 1848, 67.
—— Königi, on the spiral body of the, 1853, 51.
Cholera, Dr. Mackintosh on, 1837, 107.
——, Dr. R. D. Thomson on Mr. Farr's law of recovery and mortality in, 1838, 126.
——, Asiatic, Dr. W. H. Crook on a supposed connexion between an insufficient use of salt in food and the progress of, 1848, 88.
—— in the Indian armies, Dr. C. Finch on the prevalence and mortality of, 1850, 161.
Chromatic dispersion, M. Ponton on the laws of, 1860, 16.
—— properties of the electric light of mercury, Dr. J. H. Gladstone on the, 1860, 13.
Chromatype, a new photographic process, R. Hunt on, 1843, 34.
Chromic acid, pure, on the economical preparation of, by Dr. Dalzell, 1859, 68.
Chromoscope, J. Smith on the, 1860, 65.
Chronometer, new compensating balance for, by E. J. Dent, 1842, 10.
—— with a glass balance-spring, by E. J. Dent, 1834, 595.
—— springs, E. J. Dent on the rate of protected, 1842, 9.
Chronometers, E. J. Dent on the application of a coating of gold to the steel balance-springs of, 1841, 41.
——, E. J. Dent on the application of a glass balance-spring to, 1833, 421.
——, E. J. Dent on the effects of temperature on the regulators of, 1838, 35.
——, J. G. Ulrich on improvements in, 1847, 42.
——, on the variation in the rates of, by J. Hartnup, 1854, 20.
Chronometry, natural, C. Babbage on a method of, 1835, 6.
Chū mā (grass-cloth of India), Dr. H. Cleghorn on the, 1850, 112.
Churchyards, J. E. Bowman on the antiquity of planting the yew in, 1836, 101.
Cilia and ciliary currents of the oyster, Rev. J. B. Reade on the, 1845, 66.
Ciliary motion, P. Duncan on the nature of, 1853, 66.
Ciliograda, British, Prof. E. Forbes and J. Goodsir on the, 1839, 85; 1840, 141.
——, Prof. E. Forbes on the genera or species of, which have been founded upon Beroë cucumis, 1849, 76.
Ciliogrades, J. Price on the embryogeny of, 1846, 86.
Cimbri, some notice of the, by Rev. R. Williams, 1845, 81.
Cimex hirundinis and C. pipistrelli, notice of, by Rev. L. Jenyns, 1838, 104.
Cinchona, on Matias bark as a substitute for, by Dr. Mackay, 1840, 160.
——, V. Hurtado on the geographical distribution of, and trade in the, 1860, 162.
Cineras vittata of Leach, C. W. Peach on the, 1845, 65.
Circle, astronomical, Rev. Dr. Robinson on determining the index error of an, by reflexion of the wires of its telescope, 1843, 16.
Circulating organs in diving animals, Dr. J. Houston on the, 1835, 81.
Cirropteron, Sars, Dr. Allman on the genus, 1843, 77.
Cistern, Kosman's, as a sanitary machine, Mr. Wood on, 1849, 134.
Citric, tartaric, and oxalic acids, Prof. F. C. Calvert on their action on cotton and flax fibres, 1854, 65.
Civilization, human, on the geographical distribution of animals in connexion with the progress of, 1852, 78.
——, on the influence of domestic animals on the progress of, 1860, 155.
——, on the relation of the domesticated animals to, by J. Crawfurd, 1859, 177.
——, T. Bazley on trade and commerce as the auxiliaries of, 1858, 169.
Classification of animals, Prof. J. R. Greene on embryology in reference to the, 1860, 132.
—— in the animal kingdom, Prof. Agassiz on the principles of, 1835, 67.
——, Prof. V. Carus on the value of development in, 1860, 125.
Claudet's photographometer, 1849, 35.
Clay, boulder-, Hugh Miller on scratched pebbles and fossil specimens from the, and on chalk flints and oolitic fossils from the, in Caithness, 1850, 93.
—— formation, plastic, of Poole, Rev. W. D. Clarke on the, 1837, 93.
——, great brown, of the neighbourhood of Cambridge, Rev. Prof. Sedgwick on the, 1845, 43.
—— land, the larch recommended for cultivation in, 1838, 119.
——, London, Prof. Agassiz on the fishes of the, 1846, 52.
——, London, Rev. Prof. Henslow on nodules from the, 1845, 51.
——, London, Rev. Prof. Henslow on the detritus derived from the, and deposited in the red crag, 1847, 64.
——, London, of Sheppey, J. S. Bowerbank on the remains of a gigantic bird from the, 1851, 55.
Clay-slate and gritstone, on their alteration into mica-schist and gneiss by the granite of Wicklow, by J. B. Jukes, 1856, 68.

Clays, pleistocene, of Stratheden, Fifeshire, D. Page on the skeleton of a seal from the, 1858, 103.
Cleavage of the Devonians of the south of Ireland, Profs. Harkness and Blyth on the, 1855, 82.
—— planes, E. Hopkins on the polarity of, their conducting-power, and their influence on metalliferous deposits, 1848, 69.
——, slaty, H. C. Sorby on, 1857, 92.
——, slaty, Rev. Prof. Haughton on a model illustrative of, 1857, 69.
Clegg's new safety lamp, notice of, 1840, 210.
Cleland (Dr.), statistics of Glasgow, 1836, 140.
Cliff's dry gas-meter, Mr. Samuda on, 1838, 158.
Cliffs, ancient, and needles in the chalk of the valley of the Seine in Normandy, Sir C. Lyell on, 1840, 111.
Climate, on the relative distribution of land and water as affecting, by Prof. Hennessy, 1856, 66.
——, Dr. Forchhammer on sea-water, and the effects of variation in its currents on, 1846, 51.
—— of the Albion Mines, Nova Scotia, Col. Sykes on the, 1854, 35.
—— of British Guiana, P. Sandeman on the, 1859, 52.
—— of England, H. Fairbairn on the changes in the, 1842, 26.
—— of Hull, W. Lawton on the, 1853, 27.
—— of Ireland, Rev. Dr. Lloyd on the, 1852, 26.
—— of Ireland, on the influence of the Gulf-stream on the, by Prof. Hennessy, 1857, 132.
—— of London, the mean year, or solar variation, through the seasons, of the barometer in the, by Luke Howard, 1844, 14.
—— of Nice, Col. Sykes on the, 1854, 34.
—— of the valley of the Nile, T. S. Wells on the, 1850, 45.
—— of North America, Dr. Daubeny on the, 1838, 29.
—— of Orkney, Rev. C. Clouston on the, 1859, 48.
—— of Southampton, Dr. J. Drew on the, 1854, 29.
—— of Torquay and South Devon, E. Vivian on the, 1856, 48.
—— of Western India, Dr. Buist on the, 1851, 29.
—— within the tropics, on the variations of, 1853, 91.
Climates of France, Dr. C. Martins on the, 1850, 46.
—— of the Antarctic regions, Capt. Maury on the, 1860, 46.
——, tropical, Prof. Piazzi Smyth on a mode of cooling the air of rooms in, 1850, 188.
——, tropical, Prof. Rankine's remarks on Prof. Smyth's mechanical process for cooling air in, 1852, 128.
Clock, astronomical, M. Bessel on the, 1842, 1.
——, astronomical, Rev. Dr. Robinson on the barometric compensation of the pendulum of the, 1843, 17.
——, polar, Prof. Wheatstone's description of the, 1848, 11.
—— movement, and new mode of suspending the pendulum, by Mr. L. Cooke, 1843, 101.
Clocks, ordinary, J. Hartnup on controlling their movements by galvanic currents, 1857, 13.
——, E. J. Dent on the effects of temperature on the regulators of, and improvements in pendulums, 1838, 35.
——, E. J. Dent on the rate of a compensating pendulum, 1842, 10.
Clockwork, on apparatus by which the influx and efflux of the tide are rendered available as agents for effecting the motions of, by R. Roberts, 1849, 128.
Cloth, grass-, of India, Dr. H. Cleghorn on the, 1850, 112.
——, incombustible, J. Latto on, 1849, 33.
Clouds at Makerstoun, T. Hopkins on the daily formation of, 1850, 36.
——, J. Nasmyth on the application of the law of definite proportions to the stratification of, 1842, 26.
——, Rev. Dr. Whewell on measuring the height of, 1846, 15.
——, on the nomenclature of, 1833, 460.
——, Prof. Stevelly on the nature and origin of, 1834, 564.
Clupeadæ, Coregoni, and Salmonidæ, Dr. Knox on the natural and economic history of certain species of the, 1846, 79.
Cnicus tuberosus at Avebury Hills, Prof. J. Buckman on the finding of, 1857, 95.
Coal, anthracite, G. Crane on the smelting of iron with, 1837, 52.
——, anthracite, Mr. Player on its application at the Gwendraeth iron-works, 1839, 130.
—— basin, South Welsh, G. P. Bevan on the marine shell-bed of the, 1858, 80.
—— basin, South Welsh, between the Vale of Neath and Carmarthen Bay, Mr. Logan on the, 1837, 83.
—— and iron trade of the west of Scotland, on the progress, extent, and value of the, by Dr. J. Strang, 1855, 193.
Coal-burning without smoke, by the method of steam-inducted air-currents, by D. K. Clark, 1859, 230
——, combustion of, and prevention of smoke, W. Fairbairn on the, 1842, 107; C. W. Williams on the, 1842, 108.
—— deposits in West Virginia, Prof. Buckman on the, 1854, 78.
—— deposits of England and Wales, Dr. W. H. Crook on the unity of the, 1837, 75.
—— deposits of the Asturias, S. P. Pratt on the, 1845, 49.

Coal district of South Lancashire, J. Heywood on the geology of the, 1837, 77.
—— districts of Ireland, R. Griffith on the, 1852, 47.
Coal-field, Lancashire, E. W. Binney on the, 1842, 49.
——, Lesmahago and Douglas, in Lanarkshire, J. Bryce on the, 1850, 77.
——, Nova Scotia, on the occurrence of a land-shell and reptiles in the, by J. W. Dawson, 1859, 102.
—— of Berwick and North Durham, D. Milne on the, 1838, 76.
—— of Newcastle, J. Buddle on the, 1838, 74.
—— of Pennsylvania, bituminous, H. Phillips on the, 1837, 96.
—— of Scotland, on the Mushet band of the, 1846, 62.
—— of South Wales, W. P. Struvé on the, 1848, 75.
——, South Staffordshire, on the relations between the new red sandstone, the coal-measures, and the Silurian rocks of the, by J. B. Jukes, 1849, 55.
——, Tynedale, on the, 1860, 86.
——, Warwickshire, C. Twamley on a singular fault in the southern termination of the, 1853, 62.
Coal-fields of America, Prof. H. D. Rogers on the, 1848, 74.
—— of Berwickshire, D. Milne on the, 1834, 629.
—— of New South Wales and Van Diemen's Land, F. M'Coy on the plants of the, 1847, 64.
——, North Staffordshire, on fossil fish from the, 1860, 88.
—— of Scotland, Lord Greenock on the, 1834, 639.
Coal-formation of Nova Scotia, J. W. Dawson on the fossils of the, 1855, 81.
—— formation of the west of Scotland, J. Craig on the, 1840, 89.
Coal-gas, on the combustion of, 1831–32, 88.
——, R. Mallet on phenomena of flame from, 1835, 49.
—— the cheapest fuel for cooking, 1838, 159.
Coal-measures of South Wales, on the chemical composition of some iron ores called "brass," in the, by E. C. Nicholson and Dr. D. S. Price, 1855, 66.
—— in Queen's county, Ireland, W. H. Baily on two new species of Crustacea (Bellinurus, König) from the, 1858, 76.
—— of West Lancashire, W. C. Williamson on the, 1837, 81.
Coal-mines, J. Nasmyth on a steam-fan for the ventilation of, 1851, 116.
——, on a machine for ventilating, by W. Brunton, 1849, 111.
——, on Gordon's plan of ventilating, by W. Nicholson, 1849, 125.
——, on the working and ventilation of, by J. Brakenridge, 1857, 180.
Coal-mines, on the evolution of gas in Wallsend colliery, by G. Clarke, 1852, 124.
—— of Belgium, R. Valpy on the, 1846, 100.
—— of the north of England, Prof. Ansted on the methods of working and ventilating the, 1845, 53.
Coal-naphtha, Mr. Leigh on a new product obtained from, 1842, 39.
—— naphtha, on some of the basic constituents of, by C. G. Williams, 1855, 74.
Coal strata in Wigan, W. Peace on the dislocations of, 1837, 82.
—— strata of North Staffordshire, with reference particularly to their organic remains, R. Garner and W. Molyneux on the, 1859, 103.
—— of India, Prof. Ansted on the, 1846, 63.
—— of Silesia, Dr. Göppert on the origin of the, 1846, 50.
—— Torbane-hill and other varieties of, Prof. Redfern on the nature of, 1854, 102.
——, E. R. J. Knowles on the annual consumption of, and the probable duration of the coal-fields, 1846, 105.
——, on the combustion of, and the prevention of smoke, by Mr. Williams, 1840, 199; 1842, 108.
——, on the production of sulphurous acid gas from the combustion of, by J. Spence, 1854, 75.
——, small, and coal-dust, on cementing, for fuel, 1838, 85.
——, on the occurrence of peculiar vegetable organisms resembling the sporangia of Lycopodium, by Prof. Balfour, 1854, 97.
——, on some experimental borings in search of, by Prof. Buckman, 1848, 67.
——, Prof. Boguslawski on the formation of, 1847, 66.
——, Prof. Phillips on the microscopic structure of, 1842, 47.
——, W. C. Williamson on the origin of, 1842, 48.
——, S. Benson on the relative position of the various qualities of, in the South Wales coal-measures, 1848, 65.
Coal-pit accidents, Capt. J. Addison on, 1859, 228.
Coal-pits, E. Bowness on a plan for drawing up coals without ropes or chains, 1844, 98.
Coals, Dr. Ure on the nature of different, 1839, 20.
——, on some theoretical and practical methods of determining the calorific efficiencies of, by Prof. W. R. Johnson, 1851, 47.
——, bituminous, on some modified results attending the decomposition of, by heat, by Dr. Hayes, 1857, 50.
Coal-tar, W. H. Perkin on the purple dye obtained from, 1858, 58.

Cobalt, ammonio-iodide of, Rev. J. B. Reade on, 1857, 56.
Coccosteus, Hugh Miller on the under jaw of the, 1850, 92.
Cocculus indicus of commerce, Dr. G. A. W. Arnott on the, 1834, 597.
Cochineal, on a simple volumetric process for the valuation of, by Prof. Penny, 1855, 68.
Cochliodus, Prof. M'Coy on the mode of succession of the teeth in, 1852, 55.
Cocoa leaves, Prof. Johnston on the properties and composition of the, 1853, 43.
Cocobee, or Arabian leprosy, Dr. Hancock on the disease called, 1837, 128.
Cod, on the structure of the otoliths of the, by Prof. Redfern, 1859, 174.
Codeine and iodine, Dr. T. Anderson on a compound of, 1850, 48.
Coffee-roasting, R. Davison on, 1849, 115.
Coke, J. Nasmyth on the diamond-like hardness of the particles of, 1848, 57.
Cold, Dr. Osborne on its effects on the body, 1835, 94.
——, W. S. Ward on the production of, by mechanical means, 1852, 131.
Coleoptera, myrmecophilous, Dr. J. A. Power on the, 1858, 129.
—— of Old Calabar, A. Murray on the, 1855, 115.
Coleopterous insects of Sutherland, J. Wilson on the, 1834, 615.
Collidine, a new base, of the picoline series, 1854, 64.
Collieries, W. P. Struvé on the ventilation of, with description of a new mine-ventilator, 1848, 120.
—— at Workington, Rev. Prof. Sedgwick on an incursion of the sea into the, 1837, 75.
Collieries' Club of Darton, T. Wilson's account of the, 1838, 173.
Colliery, Wallsend, on the evolution of gas in, by G. Clarke, 1852, 124.
Collimator for completing the adjustments of reflecting telescopes, by Prof. G. J. Stoney, 1856, 30.
——, fixed, G. B. Airy on a question of probabilities which occurs in the use of a, for the verification of the constancy of position of an azimuth circle, 1850, 1.
Collision and impact, Prof. E. Hodgkinson on, 1835, 107.
Collodion, albuminized, W. S. Ward on, 1856, 58.
—— negatives, G. R. Berry on, 1854, 64.
—— photographs, C. Pooley on engraving, by means of fluoric acid gas, 1856, 58.
—— plates, albuminized, W. S. Ward on the preservation of, 1857, 61.
Collyweston slates, Capt. L. L. B. Ibbetson and J. Morris on the position of the, 1847, 127.
Colmar's (T. de) arithmometer, or calculating machine, explanation of, 1854, 1.
Colonial Penny Postage, on the importance of a, by Mrs. Fison, 1858, 177.
Colour in fluor spar, Sir D. Brewster on a new phenomenon of, 1838, 10.
——, J. Smith on the chromoscope, to verify certain opinions as to the cause of, 1860, 65.
—— of hæmatoxylin, Prof. Erdmann on the, 1842, 33.
—— of lichens, on the, 1841, 53.
——, production of, and the theory of light, J. Smith on the, 1859, 22.
——, Sir D. Brewster on the cause of the increase of, by the inversion of the head, 1840, 7.
Colour-blindness, Dr. J. H. Gladstone on, 1860, 12.
——, on the statistics of, by Prof. G. Wilson, 1859, 228.
Coloured sectors, rapidly revolving, Prof. Stevelly on the occasional distinct vision of, 1860, 21.
Colouring matter, Prof. Erdmann on hæmatoxylin as a, 1842, 33.
—— matter of the bile, Dr. Thudichum on the physiological relations of the, 1860, 147.
—— matters of madder, J. Higgin on the, 1848, 54.
Colours, on a singular effect of the juxtaposition of, under particular circumstances, by Prof. Wheatstone and Sir D. Brewster, 1844, 10.
——, on the binocular vision of surfaces of different, by Sir D. Brewster, 1855, 9.
——, Prof. Stevelly on an instrument for whirling cards with coloured sectors on them to show the combination of, 1850, 21.
——, Dr. Gladstone on his own perception of, 1860, 12.
——, compound, on the theory of, with reference to mixtures of blue and yellow light, by Prof. J. C. Maxwell, 1856, 12.
——, harmonious, in plants and the plumage of birds, Rev. Prof. J. M'Cosh on the, 1854, 101.
——, homogeneous, Prof. Helmholtz on the mixture of, 1853, 5.
—— in precious opal, Sir D. Brewster on the cause of the, 1844, 9.
—— of liquids, R. W. Townsend on an instrument for exhibiting the, by transmitted light, 1852, 20.
—— of natural bodies, Sir D. Brewster on the, 1831–32, 547.
—— of the spectrum, on the mixture of the, by Prof. J. C. Maxwell, 1859, 15.
—— of the spectrum, Prof. J. C. Maxwell on an instrument for exhibiting any mixture of the, 1860, 16.
—— of the spectrum, Rev. Prof. Challis on some facts relating to the composition of, 1834, 544.
—— of thin plates (Newton's rings), Mr. R. Potter, jun. on the, 1831–32, 556.

Colours, organic, Dr. G. Wilson on the influence of sunlight over the action of the dry gases on, 1850, 65.
Coluber natrix of Italian authors, living specimen of, 1838, 116.
Colymbus arcticus, occurrence of, near Swansea, 1848, 125.
Coma, intermittent, Sir D. J. H. Dickson on a case of, 1839, 95.
Comanche Indians, W. Bollaert on the, 1846, 116.
—— vocabulary, on a, 1846, 117.
Comatula rosacea, on the occurrence of the pentacrinoid larva of, in Lamlash Bay, Isle of Arran, by Dr. W. B. Carpenter, 1855, 107.
—— Sarsii, a new species of Echinodermata, J. Alder on, 1859, 142.
Combination, Dr. Andrews on the heat of, 1843, 32.
Combinations, on a theorem in, by H. M. Jeffery, 1856, 3.
Combustible compounds to be used in war, J. Mackintosh on the application of, 1858, 214.
Combustion, Dr. C. J. B. Williams on the phenomena and products of a low form of, 1834, 588.
——, Dr. N. Arnott on the regulation of, 1847, 47.
——, heat of, J. P. Joule on the electric origin of the, 1842, 31.
——, spontaneous, A. Booth on, 1841, 50.
Comet discovered by Brorsen in 1846, and its reappearance in 1851, Dr. Von Galen on the, 1851, 23.
——, Donati's, on, 1858, 28.
——, Halley's, Sir J. F. W. Herschel on, 1838, 19.
——, Rev. Prof. Powell on De Vico's, 1849, 2.
Comets and planets, Sir J. W. Lubbock on the calculation of the perturbations of, 1847, 9.
—— in space, on the distribution of the orbits of the, by Prof. Mossotti, 1857, 23.
——, on the constitution of, by Dr. Siljeström, 1858, 30.
——, Prof. J. C. Adams on the application of graphical methods to the determination of the perturbations of, 1849, 1.
Cometes (Humming-birds), new species of, by J. Gould, 1853, 68.
Compass, a mechanically adjusted, 1854, 151.
——, Baron de Bode's insulated, J. Y. Oliver on the, 1845, 16.
——, changes of deviation of the, on board iron ships by "heeling," J. T. Towson on, 1859, 28.
—— in iron steamships, G. B. Airy on correcting the local magnetic action of the, 1838, 21.
——, on the changes of the action of, in iron ships, by Rev. W. Scoresby, 1854, 49.
Compass, mariner's, Mr. Ritchie on a, 1833, 112.
—— needle or bar, new, by Rev. W. Scoresby, 1836, 18.
—— pivots, Capt. E. J. Johnson on native alloy for, 1840, 198.
——, Pope's fluid, improved, 1836, 132.
——, portable azimuth, new, E. J. Dent on a, 1846, 25.
——, new proportional, on a, 1844, 8
——, proportional, on an improvement in the, by Colonel Shortrede, 1859, 63.
——, ship's, E. J. Dent on a method of suspending a, 1845, 16.
Compasses, Capt. E. J. Johnson on the deviations of the, of H. M. steamships Ajax and Blenheim, 1851, 8.
——, Capt. E. J. Johnson on placing them in iron ships, 1852, 10.
—— of iron ships, on, 1854, 49, 53, 55.
——, sea, Rev. T. Dury on, 1841, 27.
Compounds, on the time required for their decomposition, by Dr. T. Woods, 1857, 61.
Compressibility of water, on, 1833, 353.
Concrete, J. I. Hawkins on the formation of, 1843, 99.
Condensation, surface, Dr. J. P. Joule on, 1859, 236.
Condenser, multiplying, new, Prof. Svanberg on a, 1846, 31.
Conductibility of the earth, Prof. Matteucci on the, 1850, 56.
Conduction and induction, Sir G. C. Haughton on the nature of, 1847, 27.
Conductive powers of various substances for heat, W. Hopkins on the, 1857, 70.
Conductors, metallic, Sir W. S. Harris on some remarkable examples of the protection afforded by, against heavy strokes of lightning, 1847, 23.
——, electrified spherical, Prof. W. Thomson on the mutual attraction between two, 1852, 17.
"Cone-in-cone," on the origin of, by H. C. Sorby, 1859, 124.
Confectionary, coloured, Dr. Macnamara on, 1857, 55.
Conferva linum, Prof. Allman on the structure of the endochrome in, 1853, 62.
—— nivea, Dr. Lankester on, 1840, 144.
Conglomerates, red, of Torbay, on the Beekites found in the, by W. Pengelly, 1856, 74.
Congruence $nx \equiv n + 1 \pmod{p}$, J. T. Graves on the, 1856, 1.
Congruences, on a particular class of, by H. M. Jeffery, 1856, 6.
Coniferæ, Dr. R. Brown on the plurality and development of embryos in the seeds of, 1834, 596.
——, fossil, W. Nicol on the structure of, 1834, 660; 1835, 73.
Connemara, Prof. Rowney on the analysis of some minerals of, 1860, 71.

Consciousness and adaptive movements, Dr. Laycock on the physiology of cells in relation to, 1854, 110.
Consumption and ague, Dr. Groshaus on the supposed antagonism between, 1847, 94.
——, pulmonary, Mr. Noble on the influence of the factory system in the development of, 1842, 96.
Contagions, Prof. Liebig on, 1840, 72.
Continuity, Prof. Young on the principle of, in reference to certain results of analysis, 1846, 1.
Conus, two species of (C. concavus and C. cadonensis), in the lias, near Caen, in Normandy, Sir C. Lyell on, 1840, 110.
Copper, action of sea-water on, 1841, 77.
——, on the corrosive action of sea-water on, by Dr. Percy, 1849, 39.
—— and iron, native sulphate of, in Cronebane copper-mine, 1837, 47.
—— and zinc, on the chemical examination of some alloys of, by D. Forbes, 1854, 67.
—— and zinc, salts of, on the action of sulphuretted hydrogen on, by Prof. F. C. Calvert, 1855, 51.
——, basic chloride of, Dr. G. Bird on its artificial formation, 1838, 56.
—— containing phosphorus, Dr. Percy on, 1849, 39.
——, crystallized, R. Mallet on its formation in Cronebane copper-mine, 1837, 47.
——, metallic, Dr. G. Bird on the formation of artificial crystals of, 1837, 46.
——, metallic, Dr. G. Bird on the deposition of, 1838, 57.
——, on the effects of mechanical strain on the thermo-electric quality of, by Prof. W. Thomson, 1855, 17.
—— sheathing, J. Prideaux on the causes of the increased destructibility of, 1841, 43.
——, sulphato-chloride of, a new mineral, Prof. Connell on, 1847, 49.
—— vein, R. W. Fox on the electricity of a, 1834, 572.
Coprolite bed near Cambridge, Rev. J. B. P. Dennis on the pterodactyles of the, 1860, 76.
Coprolites, pseudo-, of the red crag of Felixstow, Rev. Dr. Buckland on the, 1849, 67.
Coral rag or middle oolite of the neighbourhood of Cambridge, Rev. Prof. Sedgwick on the, 1845, 43.
Corallines, calcareous, two new (Lepralia catenata and L. pectinata), 1844, 65.
Corals in the lias, Rev. P. B. Brodie on the stratigraphical position of certain species of, 1860, 73.
——, on some new species of, in the lias of Gloucestershire, Worcestershire, and Warwickshire, by Rev. P. B. Brodie, 1856, 64.
Cordylophora, a new genus of British zoophytes, Dr. Allman on, 1843, 77.
—— lacustris, Prof. Allman on the reproductive system of, 1849, 72.
Coregoni, Clupeadæ, and Salmonidæ, Dr. Knox on the natural and economic history of certain species of the, 1846, 79.
—— of Scotland, Sir W. Jardine on the, 1855, 111.
Corixa striata, R. Ball on the sounds emitted by the, 1845, 64.
Corks and bungs, W. Brockedon on the construction of a new rope employed as a core in the formation of the patent stoppers, a substitute for, 1842, 112.
Corn, in France, J. T. Danson on the fluctuations of the annual supply and average price of, 1849, 87.
—— markets of the United Kingdom, on the diversity of measures in the, by J. T. Danson, 1856, 137.
——, on the current price and the cost price of, in England, during ten years (1843–1854), by J. T. Danson, 1854, 134.
——, on a moveable granary for preserving, 1844, 99.
Cornbrash of Gloucestershire and part of Wilts, Prof. Buckman on the, 1853, 50.
Cornish coast, marine zoology of the, 1844, 64.
—— engines, duty done by, 1840, 198.
—— engines, J. Taylor on the duty of the, 1837, 133.
Cornulites, and other allied Silurian fossils, J. W. Salter on the structure and relations of, 1845, 57.
Corrosion of metals by sea-water, Prof. E. Davy on, 1835, 34, 36.
Corymorpha nutans, a new Cornish zoophyte, 1847, 78.
Cosmoramic lens, stereoscopic, 1854, 70.
Cottage for agricultural labourers, H. J. K. Porter on the best plan of, 1860, 194; H. Roberts on, 196.
Cotton and flax fibres, Prof. F. C. Calvert on the action of citric, tartaric, and oxalic acids on, 1854, 65.
—— fabrics, on the formation of rosolate of lime on, in hot climates, by Prof. F. C. Calvert, 1859, 68.
—— manufacture in the United Kingdom, J. T. Danson on the connexion between slavery in the United States and the, 1856, 137.
——, manufactured, on the causes of the fall in price of, by J. P. Hennessy, 1858, 178.
——, Dr. A. Burn on the growth of, in India, 1840, 146.
——, Mr. Felkin on the growth of, 1840, 146.
—— of commerce, Major-General Briggs on its cultivation, 1839, 90.
—— plants, Prof. Royle on the different

species of, and on the culture of cotton in India, 1842, 61.
Cotton trade, as an auxiliary of civilization and comfort, by T. Bazley, 1858, 169.
Courland, on certain ethnological questions connected with the coast of, by Dr. Latham, 1853, 86.
Cow-tree, milk of the, 1837, 58.
——, Prof. T. Thomson on galactin from the, 1838, 46.
Crag and London clay of Suffolk, Sir C. Lyell on remains of mammalia in the, 1839, 69.
——, coralline and red, Prof. E. Forbes on the Echinodermata of the, 1851, 58.
——, red, J. S. Bowerbank on the great shark of the, 1851, 54.
——, red, Rev. Prof. Henslow on nodules from the, 1845, 51.
——, red, Rev. Prof. Henslow on detritus derived from the London clay, and deposited in the, 1847, 64.
——, red, Sir C. Lyell on a stratum of stones covered with barnacles in the, 1851, 65.
——, red, Prof. Phillips on the structure of the, 1851, 67.
Crags of Norfolk and Suffolk, E. Charlesworth on the fossils of the, 1836, 48.
Crane, tubular, wrought-iron, W. Fairbairn on a, 1850, 177.
Crania anomala (Brachiopoda), L. Barrett on, 1855, 107.
——, Australian, Prof. J. H. Corbett on, 1857, 126.
——, Celtic, Sclavic, and Aztec, Prof. Retzius on, 1855, 145.
—— found in the ancient mounds in North America, Dr. Warren on, 1837, 108.
——, Irish, J. Grattan on a collection of, 1852, 84.
—— of the ancient Romans, J. B. Davis on the forms of the, 1855, 142.
—— of the Anglo-Saxons, J. B. Davis on the forms of the, 1856, 108.
—— of the ancient Britons, J. B. Davis on the forms of the, 1854, 127.
——, round and elongated, Prof. Retzius on the ethnographical distribution of, 1846, 116.
—— of the ancient Macrocephali, Dr. Minchin on the, 1857, 146.
——, Scottish, table of measurements of, by D. Wilson, 1850, 146.
—— of two species of crocodile from Sierra Leone, Dr. Falconer and W. Thompson on the, 1846, 79.
Cretaceous and tertiary formations of the Isle of Wight, Prof. E. Forbes on the, 1844, 43.
—— formation in Aberdeenshire, on the remains of the, by Rev. Dr. Longmuir, 1859, 262.
—— formation in the South of Africa, on the occurrence of a, 1854, 83.
Cretaceous series of the south-east of England, R. Godwin-Austen on the, 1857, 62.
Cretinism, Dr. Twining on, 1845, 79.
Crime, a deduction from the statistics of, by Prof. Walsh, 1856, 159.
—— and poverty, on some statistics bearing upon the relations existing between, by W. M. Tartt, 1856, 159.
—— and punishment, on subjects connected with, by W. M. Tartt, 1858, 199.
—— and education, F. G. P. Neison on, 1847, 101.
——, on the influence of education, shown by facts recorded in tables of, by G. R. Porter, 1847, 109.
—— in England and Wales, F. G. P. Neison on the statistics of, 1846, 102.
——, on the causes, extent, and preventives of, by Rev. J. Selkirk, 1853, 112.
——, on the prevention of, by W. H. Jemison, 1857, 162.
Crimean campaign, on the mortality of British officers in the, by R. T. Jopling, 1856, 144.
Criminal statistics of England and France, M. Guerry on the, 1851, 101.
—— statistics of England and Wales, R. W. Rawson on the, 1839, 117.
—— statistics of this and certain foreign countries, 1857, 168; of Ireland, 171.
Cristatella mirabilis, J. G. Dalyell on the propagation of, 1834, 604.
—— mucedo, Prof. Allman on the structure of, 1846, 88.
—— paludosa, J. G. Dalyell on the propagation of, 1834, 606.
Crocodile from Sierra Leone, Dr. Falconer and W. Thompson on the crania of two species of, 1846, 79.
Crocodiles, Prof. Owen on the communications between the tympanum and palate in the, 1848, 79.
Crocodilus acutus, Prof. Owen on the teeth of, 1838, 144.
—— cataphractus, 1846, 79.
—— Hastingsiæ, 1847, 66.
—— vulgaris, 1846, 79.
Croft husbandry, account of the system of, and the reclamation of waste lands, adopted at Gairloch in Ross-shire, by Dr. Alison, 1850, 147.
Cronebane copper-mine, co. Wicklow, on the formation of crystallized metallic copper in, 1837, 47.
Crops, Dr. Daubeny on the chemical principles involved in the rotation of, 1845, 33.
Croton oil, Dr. P. Newbiggin on its therapeutic effect in certain nervous disorders, 1840, 156.
Cruciferæ, on the morphology of the fruit in the, as illustrated by a monstrosity in the wallflower, by Prof. Allman, 1851, 70.

Crustacea, new (British well shrimps), Rev. A. R. Hogan on some, 1860, 116.
——, C. Spence Bate on, 1850, 115:—development of the shell, 115; shedding the exuviæ, 116; reproduction of limbs, 116; use of the false feet, 116; number of broods, 117; uses of the fifth pair of legs, 117; new species, 118.
——, decapodous, on the organs of generation in the, 1844, 69.
——, Dr. T. Williams on the structure and functions of the branchial organs of the, 1848, 83.
——, on an undescribed modification of the respiratory organs of certain, by J. O. Westwood, 1831–32, 603.
—— found by Prof. E. Forbes and Mr. M'Andrew in their cruises round the coast, Prof. T. Bell on the, 1846, 80.
——, H. D. S. Goodsir on the reproduction of lost parts in the, 1844, 68.
——, Sir J. G. Dalyell on exuviation or the change of the integuments in the, 1850, 120.
——, J. O. Westwood on the transformations of the, 1834, 608.
——, on the embryo state of Palinurus vulgaris, by R. Q. Couch, 1857, 102.
—— in the tilestones of Kington, Herefordshire, R. Banks on the discovery of, 1855, 78.
——, on the Pterygotus and Pterygotus beds of Great Britain, by D. Page, 1855, 89.
——, on two new species of (Bellinurus, König), from the coal-measures in Queen's county, Ireland, by W. H. Baily, 1858, 76.
Crustacean, phyllopod, in the upper Ludlow rock of Ludlow, Rev. W. S. Symonds on a, 1855, 98.
—— impressions from the trias of Dumfriesshire, Prof. Harkness on, 1854, 86.
Crustaceans, minute fossil, in palæozoic rocks, Prof. Phillips on, 1841, 64.
Cruziana semiplicata, a new species of fucoid, description of, by J. W. Salter, 1852, 58.
Crystalline bodies, on the elasticity of, by Prof. E. Hodgkinson, 1853, 36.
—— lens after death, Sir D. Brewster on the polarizing structure in the, 1836, 16.
—— substances, Prof. W. Thomson on the theory of magnetic induction in, 1850, 23.
Crystallization, artificial, of metallic carburets, S. Brown on the, 1839, 39.
—— of metals by voltaic action, Dr. G. Bird on the, 1837, 45.
—— of tourmaline, titanium, and quartz within mica, amethyst, and topaz, Sir D. Brewster on the, 1853, 3.
——, H. F. Talbot on a new principle of, 1847, 58.
—— under extreme pressure, W. S. Ward on, 1847, 60.
Crystallized bodies, on their unequal expansion by heat, 1837, 44.
—— metallic copper, R. Mallet on the formation of, in the Cronebane copper-mine, 1837, 47.
—— powders, Sir D. Brewster on the production of crystalline structure in, by compression and traction, 1853, 3.
—— surfaces, Mr. MacCullagh on the laws of reflexion and refraction from, 1835, 7.
—— surfaces, Sir D. Brewster on the action of, upon common and polarised light, 1836, 13.
Crystallogenesis, and the equivalent in the mineral kingdom corresponding to geographical distribution in the animal and vegetable kingdoms, by S. Highley, 1856, 172.
Crystallographic notation, J. J. Griffin on a new method of, 1840, 88.
Crystallography, Dr. Leeson on a new system of, 1846, 46.
Crystals, circular, notice of experiments on, by Sir D. Brewster, 1849, 6.
——, doubly refracting, M. Dove on a method of measuring the absorption of polarized light in, 1854, 10.
—— formed by electrical action, 1836, 47.
—— from the sea-coast of Africa, T. J. Pearsall on, 1853, 45.
—— in the human intestines, Dr. Bellingham on, 1838, 134.
—— in the cavities of topaz, Sir D. Brewster on, 1844, 9.
——, minute, in the cavities of topaz, Sir D. Brewster on the rotation of, 1845, 9.
——, method of heating, 1837, 44.
—— of acetate of cadmium, Sir D. Brewster on the absorption of the, 1855, 11.
—— of iron pyrites, 1836, 77.
——, oblique prismatical, on the positions of the axes of optical elasticity in, 1834, 556.
—— of metallic copper, artificial, 1837, 46.
—— of silver, T. E. Blackwall on the production of, 1838, 74.
—— of sugar in Rhododendron ponticum, 1836, 106.
——, pseudomorphous, in new red sandstone, Prof. Strickland on, 1853, 61.
——, Sir W. R. Hamilton on the propagation of light in, 1838, 6.
——, snow, J. Wolley on, 1858, 40.
——, three-twin, of harmotome, Dr. Tamnau on, 1843, 38.
Cubebin, on the action of concentrated sulphuric acid on, in relation to the test for strychnine by bichromate of potash and sulphuric acid, by J. S. Brazier, 1859, 256.
Cuculus glandarius, captured in co. Galway, 1843, 71.
Cucumber, Dr. T. Bell Salter on the true nature of the tendril in the, 1846, 88.
Culm field of Devon, Rev. D. Williams on the, 1837, 94.

Cumbrian mountains, Prof. Phillips on the removal of boulders from the, 1836, 87.
Cuneiform character, on the plastic origin of the, and its relation to our own alphabet, by J. Nasmyth, 1856, 118.
Cunningham's plan for reefing topsails, J. Grantham on, 1854, 150.
Currency and banking, suggestions for an improved system of, by F. Bennoch, 1858, 97.
——, English metallic, on a method of substituting francs and centimes for the, by J. Yates, 1854, 146.
—— in Ireland, on the laws of the, by J. W. Gilbart, 1852, 115.
—— in Scotland, on the laws of the, by J. W. Gilbart, 1855, 166.
——, on the laws of the, as exemplified in the circulation of country bank notes in England since 1844, by J. W. Gilbart, 1854, 136.
Currents, arctic and antarctic, A. G. Findlay on, 1854, 117.
—— of the Indian seas, Dr. Buist on the, 1853, 12.
—— produced by the action of the winds and tides, and the structures generated in the deposits formed under their influence, by which the physical geography of the seas at various geological epochs may be ascertained, H. C. Sorby on the, 1855, 97.
Curves and surfaces, on certain properties of the radii of curvature of, and their application to the method of polar reciprocation, by T. Martin, 1857, 4.
——, inverse, and inverse curved surfaces, Rev. Dr. Booth on the mutual relations of, 1858, 3.
——, magnetic, Prof. W. Thomson on, with applications to problems in the theories of heat, electricity, and fluid motion, 1852, 18.
—— of the fourth order having three double points, A. Cayley on, 1860, 4.
—— produced by two mirrors in rotation, Prof. Anderson on, 1845, 9.
——, F. Bashforth on a machine for tracing a variety of, 1845, 3.
Cuscuta epilinum, found in Ireland and Scotland, 1840, 148.
—— epilinum, J. E. Bowman on, 1839, 89.
Cuttle-fish, on the crystalline lens of the, by Sir D. Brewster, 1858, 10.
——, on the shell of the, by L. Reeve, 1846, 82.
Cyanic acid, on a new form of, by Baron Liebig, 1855, 64.
Cyanide of lead, on forming a pure, by Dr. R. D. Thomson, 1841, 54.
—— of potassium, on its application to killing insects for the cabinet, by G. B. Buckton, 1854, 106.
Cyanogen, G. Fownes on the direct formation of, from its elements, 1841, 52.
Cyclopteris hibernica, on the fructification of, by W. H. Baily, 1858, 75.
Cydippe, J. Price on the genus, 1859, 155; 1860, 120.
—— of the British seas, 1839, 85.
—— pileus and C. Flemingii, Prof. E. Forbes and J. Goodsir on, 1840, 141.
Cyphaspis, J. W. Salter on the genus, 1852, 61.
Cyphoniscus, a new genus of Silurian fossils, J. W. Salter's description of, 1852, 59.
Cypris in a part of the tertiary freshwater strata of the Isle of Wight, J. Prestwich on the occurrence of, 1846, 56.
Cyrtia trapezoidalis, a British fossil, 1839, 69.
Cysticercus tenuicollis, a variety of hydatid, Dr. Houston on, 1835, 83.
Cystideæ, British, Prof. E. Forbes on discoveries among the, 1848, 62.
Cystideans, new, from the Wenlock shale near Walsall, Prof. Buckman on, 1847, 61.

Daguerre's photogenic process, F. Talbot's remarks on, 1839, 3.
Daguerreotype, as applied to the drawing of fossils, 1840, 121.
—— drawings, Sir D. Brewster's account of the camera obscura and other apparatus used in making, 1840, 9.
—— pictures, Prof. Draper's method of multiplying, 1843, 34.
—— plates, A. Goadby on Fizeau's process of etching, 1845, 76.
—— plates, on different properties of the solar radiations which have permeated coloured media, in influencing the conditions of, so as to receive or reject mercurial vapour, by A. Claudet, 1847, 35.
—— process, A. Claudet on the dangers of the mercurial vapours in the, 1851, 44.
—— process, A. Claudet on the theory of the phenomena of photography in the, 1849, 35.
Daltonism, Prof. Wartmann on, 1841, 40.
Damoiseau's work on the Theory of the Moon, notice of, 1836, 12.
Daucus (wild carrot), Prof. E. Forbes on the varieties of, 1849, 70.
Dauglish's (Dr.) new mode of bread-making, Dr. W. Odling on, 1859, 76.
Davy lamp, 1835, 55, 56.
Daylight, diffuse, Dr. A. Ure on a mode of measuring comparatively, at any time and place, 1839, 7.
Deaf and dumb, Dr. Fowler on the state of the, 1845, 85.
—— and dumb in 1851, on the census of, by D. Buxton, 1854, 132.
—— and dumb in Ireland, statistics of the, 1852, 121.
Deafness, dumbness, and blindness, Dr. Fowler on a case of, 1841, 81.
——, Dr. Yelloly's improved acoustic instrument for, 1838, 129.

Death by aconite, Dr. E. R. Harvey on the mode of, 1860, 133.
—— by chloroform and ether, Dr. C. Kidd on, 1860, 136.
—— from a blow on the stomach, Dr. Holland on the cause of, 1837, 104.
Deaths in the metropolis, on the fluctuations in the number of, during fifteen years, by Dr. W. A. Guy, 1855, 167.
Decidua vera (uterine), Dr. Montgomery on a newly-discovered peculiarity in the structure of, 1836, 121.
Decimal coinage and accounts, showing the impracticability of the franc or tenpenny unit, J. A. Franklin on, 1854, 135.
—— accounts and coinage, on the plans which have been proposed of, by T. W. Rathbone, 1854, 143; 1855, 184.
—— coinage, W. Miller on, 1854, 142.
—— fractions, A. Peacock on, 1842, 10.
—— system, plan for simplifying and improving the measures, weights, and money of this country, by General Sir C. W. Pasley, 1856, 146.
—— system, uniform, of measures, weights, and coins throughout the world, S. Brown on the advantages to statistical science of a, 1856, 133.
—— system, Very Rev. Dr. Peacock on the proposal of the Commissioners for the introduction of a, 1842, 8.
Declination, magnetic charts of, S. Beswick on a method for computing, 1850, 3.
——, magnetic, J. A. Broun on the effect of height in the atmosphere on the diurnal variation of, 1850, 7.
—— magnetometer, J. A. Broun on the construction of silk suspension threads for the, 1850, 10.
Declinometer, C. Brooke on the results obtained by automatic registration of the, 1847, 40.
Decomposition, electro-chemical, Prof. Faraday on, 1833, 393.
—— of alcohol, voltaic, Prof. A. Connell on the, 1840, 81.
—— of bituminous coals by heat, Dr. Hayes on some modified results attending the, 1857, 50.
—— of water unde pressure, by the galvanic battery, J. P. Gassiot on the, 1853, 39.
——, spontaneous, of xyloidine, Dr. Gladstone on the, 1853, 41.
Deeds, on the registry of, in the West Riding, 1858, 175.
Deglutition of alimentary fluids, Prof. J. H. Corbett on the, 1860, 216.
Dellman's method of observing atmospheric electricity, Prof. W. Thomson on, 1856, 17.
Dendronotus, a new genus of Mollusca nudibranchiata, J. Alder and A. Hancock on, 1845, 65.
Dennett's rockets for preserving lives from shipwreck, notice of, 1840, 214.
Density in saturated vapours, J. J. Waterston on the gradient of, 1852, 2.
—— of various bodies when subjected to enormous compressing forces, W. Fairbairn on the, 1854, 56.
Dental system in mammalia, Prof. Owen on the homologies and notation of the, 1848, 91.
Dentition in the ruminants and other orders of mammalia, J. Goodsir on the follicular stage of, 1839, 82.
—— of the British pulmoniferous mollusca, W. Thomson on the, 1850, 126.
Deposits, post-pliocene, on the occurrence of works of human art in, by Sir C. Lyell, 1859, 93.
——, superficial, of the valley of the Aire at Leeds, T. P. Teale on the, 1858, 111.
Derbyshire rottenstone, Prof. Johnston on the, 1853, 52.
Desiccating process, R. Davison on a, 1849, 114.
Desiccation of the earth and atmosphere, general and gradual, J. S. Wilson on the, 1858, 155.
De Vico's comet, Rev. Prof. Powell on, 1849, 2.
Devonian and carboniferous systems of Westphalia, Sir R. I. Murchison on the, 1839, 72.
—— or Old Red system of Russia, Sir R. I. Murchison on the, 1840, 106.
—— district of Ireland, R. Griffith on the, 1843, 46.
—— fossils of Devon and Cornwall, W. Pengelly on the chronological and geographical distribution of the, 1860, 91.
—— rocks in North Africa, Prof. E. Forbes on Dr. Overweg's discovery of, 1851, 58.
—— rocks in the south of Ireland, J. B. Jukes on, 1852, 51.
—— strata of the south of Ireland, Profs. Harkness and Blyth on the cleavage of the, 1855, 82.
Dew-point, Rev. W. V. Harcourt on observations upon the, 1835, 54.
——, Capt. Shortrede on a chart of the, 1847, 42.
——, Dr. Anderson on the, 1840, 40.
——, Dr. Apjohn on the, 1835, 27.
—— formula (Dr. Apjohn's), verification of, 1843, 36.
—— hygrometer, improvements on a, by Prof. A. Connell, 1855, 38.
Diabetes, Dr. Percy's contributions to the chemistry of, 1845, 39.
—— mellitus, Dr. Clay on, 1842, 87.
——, Prof. T. Thomson on the sugar in urine of, 1838, 43.
Diabetic sugar, crystallized, Dr. R. D. Thomson on the composition of, 1841, 54.
Dials which give the latitude, the line of north and south, and chronometer time, W. Carlile on, 1858, 41.

Diamagnetic bodies, experimental demonstration of the polarity of, by Prof. Tyndall, 1855, 22.
—— force, Prof. Tyndall on the, 1854, 14.
Diamagnetism and magnecrystallic action, Prof. Tyndall on, 1851, 15.
——, Prof. Matteucci on the laws of, 1852, 6.
Diamond, J. P. Gassiot on a peculiar form produced in a, when under the influence of the voltaic arc, 1850, 53.
——, observations on the, by Sir D. Brewster, 1852, 41.
——, Sir D. Brewster on a new structure in the, 1837, 13.
——, Prof. Rogers on the oxidation of the, in the liquid way, 1848, 60.
—— slab supposed to have been cut from the Koh-i-noor, Dr. Beke on a, 1851, 44.
——, Koh-i-noor, Prof. Tennant on the, 1852, 39.
——, Koh-i-noor, Prof. Tennant on the recutting of the, 1854, 75.
——, three specimens of, which had been subjected to intense heat, Prof. Faraday on, 1847, 50.
Diamonds, on the fluorescence and phosphorescence of, by Dr. J. H. Gladstone, 1859, 69.
Dianthus plumarius, Linn., new to the English flora, 1839, 92.
Diaphragm, changing, for double achromatic combinations, A. Claudet on a, 1859, 62.
Diarrhœa, Dr. Laycock on diagrams showing the mortality of, concurrently with progressive increase of temperature in London, 1846, 94.
Diarseniate of lead, native, of Caldbeck Fell, Prof. T. Thomson on, 1838, 46.
Diatomaceæ, G. H. K. Thwaites on conjugation in the, 1847, 87.
——, on new forms of, from the Firth of Clyde, by Prof. Gregory, 1856, 83.
—— found in chalk, on the forms of, by Rev. E. O'Meara, 1857, 97.
—— found in the neighbourhood of Hull, J. D. Sollitt and R. Harrison on the, 1853, 63.
Diatomaceous deposit found in the island of Lewis, 1859, 133.
—— vegetation of the Antarctic ocean, Dr. J. D. Hooker on the, 1847, 83.
Dichobune ovinum, Ow., on a new species of, from the upper eocene of Hordwell, Hants, by Prof. Owen, 1856, 72.
Dichodon cuspidatus, from the upper eocene of the Isle of Wight and Hordwell, Hants, Prof. Owen on the, 1856, 72.
Dichroism of the palladio-chlorides of potassium and ammonium, Sir D. Brewster on the, 1842, 13.
—— of a solution of stramonium in ether, Sir D. Brewster on the, 1842, 14.
Dichromatic phenomena among solutions, Dr. J. H. Gladstone on, 1856, 10.
Dicoryne stricta, a new genus and species of the Tubulariadæ, Prof. Allman on, 1859, 142.
Dictyodus, fossil, Prof. Owen on the teeth of, 1838, 142.
Didymium, a new metal, Prof. Mosander on, 1843, 25.
Differential wheel, triple, J. Lothian on a, 1847, 18.
Diffraction, Sir D. Brewster on new phenomena of, 1838, 12.
——, Sir D. Brewster on certain phenomena of, 1852, 24.
—— bands produced by the edges of thin plates, Sir D. Brewster on the, 1847, 33.
Diffusion, liquid, Prof. T. Graham on, 1851, 47.
Digestion, experiments on, by Dr. G. Harley, 1858, 135.
Digestive organs, Dr. R. D. Thomson on the chemistry of the, 1836, 117.
Digging machine, B. Samuelson on a, 1853, 121.
Diluvial drift containing shells and remains of animals, J. Trimmer on, 1838, 86.
Dimorphodon, a new genus of Pterodactyle, Prof. Owen on, 1858, 97.
Dimyaria, on the families of, adopted by Prof. E. Forbes and Mr. Hanley, 1847, 76.
Dingle district, Ireland, J. W. Salter on the fossils of the, 1857, 89.
—— Promontory, Ireland, Prof. Harkness on the geology of the, 1855, 83.
—— Promontory, Ireland, J. B. Jukes on the geological structure of the, 1857, 70; J. W. Salter on the fossils of the, 71.
Diomedea exulans, on the peculiar development of the Vermis cerebelli in the, by Prof. Retzius, 1855, 133.
Diophantine analysis, on the possible and impossible cases of quadratic duplicate equalities in the, by M. Collins, 1855, 2.
Dip-circle, induction, J. A. Broun on a new, 1860, 23.
Diphydæ, Prof. Huxley on the, 1851, 78.
Dipodomys, or Jerboa-rat, a new genus, by Dr. J. E. Gray, 1841, 70.
—— Phillipii, 1841, 70.
Dipping-needle, effect of three iron cylinders upon the, when placed in a given position, 1851, 9.
——, new, 1835, 25.
——, Rev. Dr. H. Lloyd on a method of observing the dip and the force by the same observation, 1834, 557.
——, Rev. Dr. Scoresby on a source of error in experiments with the, 1833, 412.
Disc, rotating, of M. Arago, on the distribution of electrical currents in the, by Prof. Matteucci, 1853, 5.

Disease, endemic, A. Keith Johnston on the geographical distribution of, as indicating the connexion between natural phenomena and health and longevity, 1850, 150.
Dispensaries, self-supporting, on, with some statistics of the Coventry Provident Dispensary, by C. H. Bracebridge, 1858, 170.
Dispersion, chromatic, M. Ponton on the laws of, 1859, 15; 1860, 16.
——, prismatic, Prof. Powell's lecture on the phenomena of, 1835, 5.
Distance of objects, simple apparatus for determining the, 1843, 102.
Distances at sea or land, P. Leahy's method of ascertaining, 1843, 101.
—— determined by the telescope, by E. Bowman, 1841, 42.
——, P. Adie on an instrument for measuring, 1860, 59.
Distillation, destructive, Dr. Reichenbach's discoveries in, 1834, 591.
—— of wood, R. Scanlan on a new substance from the, 1836, 76.
Diving animals, Dr. Houston on the circulating organs of, 1835, 81.
—— apparatus, Sir J. Richardson on a case of a diver who was injured by the bursting of the air-pipe of the, 1842, 84.
—— operations, W. S. Ward on an apparatus for giving light under water in, 1847, 132.
Divisibility of matter, infinite, Rev. Dr. Whewell on Dr. Wollaston's argument respecting, 1839, 26.
Dock, floating dry, G. Bayley on a, 1858, 206.
Docks, floating, on the formation of the entrances to, 1857, 198.
Dock-gates, some remarks on, 1837, 57.
Dodder plant (Cuscuta epilinum), J. E. Bowman on the, 1839, 89.
Dodo, long-legged, Prof. Strickland on two additional bones of the, 1849, 81.
——, Prof. Strickland on the history of the, and other allied species, 1847, 79.
Dog as the associate of man, Dr. Hodgkin on the, 1844, 81.
Dolichognathus Lloydii, 1839, 75.
—— varvicensis, 1839, 75.
Dolomite, Prof. Forchhammer on the formation of, 1849, 36.
Dolomites and gypsum, T. S. Hunt on, 1860, 83.
Donati's comet, E. J. Cooper on, 1858, 28.
Door-spring, improved, G. Beattie on an, 1850, 170.
Doris, A. Hancock and Dr. Embleton on the anatomy of, 1850, 124.
——, J. Alder on the existence of eyes in the, 1842, 69.
—— bilamellata, gregarious habit of, 1857, 108.
Dove's maps, causes of the rise of the isothermal lines in the winters of the Northern hemisphere, as represented on, by T. Hopkins, 1850, 34.
Dracæna Draco, or gum-dragon tree, Dr. Mackay on the treatment and flowering of a plant of, 1850, 114.
Drainage of a portion of Chat Moss, on the, 1848, 72.
——, G. W. Ormerod on the gradual subsidence of a portion of the surface of Chat Moss, in Lancashire, by, 1850, 101.
—— of land, A. Milward on the Upton draining-tool, 1849, 122.
—— of low lands, on an india-rubber valve for the, by Prof. J. Thomson, 1855, 210.
—— of marshes and fen-lands, on the application of steam power to the, by J. Glynn, 1848, 117.
—— of the metropolis, E. Jones on the, 1858, 213.
—— and irrigation, on a centrifugal pump and windmill for, by Prof. J. Thomson, 1855, 210.
Drawing, H. Twining on an instrument for, 1852, 32.
——, Sir D. Brewster on the conversion of relief in a, 1847, 33.
Drawing-paper, new kind of, 1842, 114.
Dredge, Dempster's, notice of, 1855, 118.
Dredging at Oban, species obtained by J. G. Jeffreys, 1842, 75.
—— round the coasts of Anglesea, 1844, 63.
—— near Sana Island, off the Mull of Cantire, species obtained by G. C. Hyndman, 1842, 70.
—— off the Mull of Galloway by Capt. Beechey, 1842, 72.
—— in Weymouth Bay, W. Thompson on, 1857, 108.
Drift of North America, Prof. H. D. Rogers on the, 1848, 75.
—— of West Galway and the eastern parts of Mayo, J. Birmingham on the, 1857, 64.
—— or boulder-clay in the vicinity of Aberdeen and north-east of Scotland, Prof. Nicol on the, 1859, 118.
——, Severn, Rev. W. S. Symonds on a fossil of the, 1857, 93.
——, superficial, on human remains in, by Rev. Dr. Anderson, 1859, 95.
——, triassic, from the neighbourhood of Frome, C. Moore on the contents of, 1860, 87.
"Drift-bedding" (a kind of false stratification), description of a working model to illustrate the formation of, by H. C. Sorby, 1856, 77.
Drift-beds and boulders of the north of Scotland, T. F. Jamieson on the, 1859, 114.
Drink, intoxicating, on the progress of

public opinion with respect to the evils produced by the traffic in, by Rev. W. Caine, 1859, 205.
Dropsy, on some cases of, 1837, 125.
Drosera, Dr. Lankester on the epidermal appendages of the genus, 1850, 113.
Druid circles, Col. J. Forbes on, 1859, 178.
Dryobalanops camphora, Dr. De Vrij on solid and liquid camphor from the, 1851, 52.
Dry rot, R. Davison on, 1849, 114.
Dublin Foundling Hospital, Dr. Maunsell on the statistics of, 1835, 113.
—— Lying-in Hospital, registry kept in, 1835, 106.
—— Normal School, 1835, 125.
Dugong oil, J. S. Brazier on, 1859, 256.
Dumbness, deafness, and blindness, Dr. Fowler on a case of, 1841, 81.
Dunnottar Castle and the Girdleness, on the section of the coast between, by Rev. Dr. Longmuir, 1859, 261.
Duodenum, Sir D. J. H. Dickson on the rupture of the, 1839, 94.
Dura Den, new fossil form (—? Dalgleisianæ) from, 1850, 70.
—— sandstone, Rev. Dr. Anderson on the, 1859, 97.
Dutch possessions in the East, remarks on the, by Col. Sykes, 1848, 112.
Dwellings for the poor, Metropolitan Society's, St. Pancras, statistical account of the, 1849, 108.
Dye, purple, obtained from coal-tar, by W. H. Perkin, 1858, 58.
Dykes, trap, in Arran, Prof. Phillips on, 1855, 94.
Dynactinometer, Claudet's, for comparing the power of object-glasses, and for measuring the intensity of the photogenic light, 1850, 12.
Dynamic electricity and the other physical forces, researches on the correlation of, by L. Soret, 1857, 16.
—— equivalent of current electricity, W. Petrie on the, 1850, 185.
Dynamical theory of gases, Prof. J. C. Maxwell on the, 1859, 9.
Dynamics, application to, of a general mathematical method previously applied to optics, 1834, 513.
Dynamometer, friction break, Prof. J. Thomson on the, 1855, 209.
——, marine, for ascertaining the force of the waves, T. Stevenson on the, 1850, 189.

Ear, human, Dr. Sym on the mechanical functions of the, 1840, 154.
——, human, on the functions of the, by Prof. H. Carlile, 1857, 116.
Ear-trumpet, improved, Dr. C. J. B. Williams on an, 1836, 36.
Earth and the atmosphere, on the general and gradual desiccation of the, by J. S. Wilson, 1858, 155.
Earth, L. Foucault's experiments on the movement of the, by means of the gyroscope, 1854, 56.
——, on an orbital motion of the magnetic pole round the north pole of the, by Rev. H. M. Grover, 1849, 8.
——, on the central heat and density of the, and the causes of volcanic phenomena, by Dr. S. Macadam, 1850, 88.
——, on the distribution of heat in the interior of the, by Dr. Siljeström, 1858, 23.
——, on the conductibility of the, by Prof. Matteucci, 1850, 56.
——, on the constitution of the, by Rev. J. Dingle, 1859, 102.
——, Prof. Hennessy on the connexion between geological theories and the theory of the figure of the, 1852, 21.
——, on the configuration of the surface of the, by Rev. J. Dingle, 1858, 150.
——, on the physical structure of the, by Prof. Hennessy, 1856, 26.
——, on the structure and magnetic phenomena of the, by J. Drummond, 1857, 22.
——, on the temperature of the, 1837, 37.
——, Prof. Hodgkinson on the temperature of the, in the deep mines near Manchester, 1840, 17.
——, Prof. J. D. Forbes on the temperature of the, at Trevandrum, 1847, 40.
——, R. Rigg's experimental inquiry into a peculiar property of the, 1837, 50.
——, Sir W. S. Harris on the method of employing vibrating magnets in the investigation of the magnetic intensity of the, 1831–32, 560.
——, W. Hopkins on the minimum thickness of the crust of the, 1839, 26.
——, W. Hopkins on the refrigeration of the, 1837, 91.
Earth's antiquity, Sir C. Lyell on the, 1846, 119.
—— crust, Rev. J. Dingle on the formation of the, 1860, 77.
—— magnetic force, Rev. Dr. Lloyd on the regular variations of the direction and intensity of the, 1843, 12.
—— rotation, D. Vaughan on its effects on atmospheric movements, 1859, 41.
—— rotation, Rev. Prof. Powell on M. Guyot's experiment on the, 1851, 23.
—— internal structure, Prof. Hennessy on studying the, from phenomena observed at its surface, 1860, 35.
—— structure, S. M. Saxby on the connexion between magnetic variation with certain peculiarities of the, 1845, 16.
—— surface, on the direction of gravity at the, by Prof. Hennessy, 1857, 24.
—— surface, on electric currents in the, by A. H. Hamilton, 1857, 48.

Earth's surface, Rev. Dr. Hitchcock on the erosions of the, especially by rivers, 1850, 85.
Earth-thermometers, observations with, by Prof. P. Smyth, 1856, 28.
Earthenware manufacture of Glasgow, Dr. Strang on the, 1856, 153.
——, notice of Mr. Prosser's method of making, from dry powder of clay compressed, 1842, 114.
Earthquake at the islands of Antigua and Guadaloupe, Feb. 8, 1843, the Hon. Capt. Carnegie on the, 1843, 59.
—— in Chile, April 2, 1851, R. Budge on the, 1851, 85.
—— shocks in the laterite of India, J. A. Broun on the velocity of, 1860, 74.
Earthquakes and volcanic phenomena, T. S. Hunt on the theory of, 1860, 84.
——, Profs. H. D. and W. B. Rogers on the phenomena and theory of, 1843, 57.
——, remarkable periodicities in, extraordinary oscillations of the sea, and great atmospherical changes, R. Edmonds on, 1845, 20.
—— in Scotland, D. Milne on the, 1840, 97.
—— on the west coast of South America, Dr. M. Hamilton on the, 1840, 123.
—— in South America, Dr. M. Hamilton on the, 1850, 82.
Earths, alkaline, on the metals of the, by Dr. Matthiessen, 1855, 66.
Earthworms and larvæ of an undescribed species, H. Peckitt on, 1858, 129.
Eblanine, a new substance from the distillation of wood, R. Scanlan on, 1836, 76.
Echinidæ, on the mechanism of respiration in the family of, by Dr. T. Williams, 1856, 101.
Echinodermata, on two species (Comatula Sarsii and Phascolosoma radiata) of, new to Britain, by J. Alder, 1859, 142.
——, Rev. C. Mayne on a mode of preserving, 1835, 71.
—— of the crag, Prof. E. Forbes on the, 1851, 58.
Echinus, Prof. E. Forbes on the European species of, and the peculiarities of their distribution, 1850, 123.
—— lividus, Prof. Dickie on the distribution and habits of, 1852, 72.
Eclipse, annular, of the sun, suggestions for the observation of the, 1847, 16.
——, annular, of Oct. 9, 1847, observations of the, 1848, 3.
—— of 1851, solar, Prof. Piazzi Smyth on the red prominences seen during the, 1852, 13.
—— of the sun mentioned in the first book of Herodotus, Rev. Dr. E. Hincks on the, 1856, 27.
—— or occultation of a star, Prof. Mossotti on the calculation of an, 1855, 26.
Eclipses, annular, explanation of the "beads" and "threads" in, by Rev. Prof. Powell, 1848, 2.
Education and crime, F. G. P. Neison on, 1847, 101.
—— of persons tried at the Middlesex Sessions, Dr. J. Bateman on the, 1858, 168.
——, E. Chadwick on the physiological as well as psychological limits to mental labour, in relation to, 1860, 185.
——, G. R. Porter on the influence of, as shown by facts in the criminal tables, 1847, 109.
—— in Birmingham, statistics of, 1839, 111.
—— in Bolton, on the state of, 1837, 138.
—— in Bristol, 1836, 136.
—— in Bristol, statistics of, 1841, 89.
—— in Glasgow, statistics of, 1846, 101.
—— in the borough of Hull, on the state of, 1840, 177.
—— in Liverpool in 1835–36, on the state of, 1836, 133; 1837, 138.
—— in Newcastle, Mr. Cargill on the statistics of, 1838, 165.
—— in the Polytechnic School at Paris, on the state of, 1841, 96.
—— in Rutlandshire, statistics of, 1839, 110, 113.
—— in Sidlesham in Kent, on the state of, 1837, 140.
—— in York, on the state of, 1837, 144.
——, industrial, H. Biggs on, 1844, 112.
——, progress and character of, in England and Wales, by J. Fletcher, 1848, 102–104.
—— of the destitute and neglected children of Great Britain, Mary Carpenter on help from the Government Grant for the, 1860, 184.
—— of the poor in Liverpool, Rev. Dr. Hume on the, 1853, 103.
——, on progressive, practical, and scientific, by Rev. F. O. Morris, 1853, 107.
——, R. Patterson on natural history as a branch of, 1841, 77.
——, suggestions on, by Rev. C. H. Bromby, 1856, 130.
Educational and moral statistics of England and Wales, by J. Fletcher, 1848, 105.
—— establishments specially adapted for persons of a feeble or imperfect mental organization, D. Gaskell on the want of, 1847, 97.
Eel, Capt. Widdrington on the habits of the, 1841, 71.
——, W. Yarrell on the reproduction of the, 1833, 446.
——, electrical (Gymnotus electricus), on its employment as a medical shock-machine by the natives of Surinam, by Prof. G. Wilson, 1859, 158.
Eggs, on the changes and chemical composition of, during incubation, 1848, 89.
—— of Buccinum, on the development of the, 1860, 139.

Egyptian language, Rev. Dr. Hincks on the, 1857, 134.
Ehrenberg's Polycystina, a new section of animalcules from Barbadoes, Sir R. H. Schomburgk on, 1847, 70.
Elastic bodies, imperfect, Prof. E. Hodgkinson on the collision of, 1834, 534.
Elasticity, Prof. E. Hodgkinson's experiments to prove that all bodies are in some degree inelastic, 1843, 23.
—— in solid bodies, experimental inquiries respecting the, by Prof. E. Hodgkinson, 1844, 25.
—— of solids, Prof. W. J. M. Rankine on the laws of the, 1850, 2.
—— of stone and crystalline bodies, Prof. E. Hodgkinson on the, 1853, 36.
—— and heat, results of the hypothesis of molecular vortices, as applied to the theory of, by Prof. W. J. M. Rankine, 1851, 3.
Elbow joint, Mr. Baird's notice of a successful excision of the, 1838, 130.
Electric cable, experimental observations on an, by W. Whitehouse, 1855, 23.
—— cable, coiled, on the discharge of a, by Prof. W. Thomson, 1859, 26.
—— current, Dr. E. du Bois-Reymond on a new effect produced on the muscles by the, 1852, 78.
—— current, on the variations of intensity undergone by the, when it produces mechanical work, by L. Soret, 1857, 16.
—— currents in submarine telegraph wires, on peristaltic induction of, by Prof. W. Thomson, 1855, 21.
—— currents, intermittent or alternating, on an instrument for determining the value of, for purposes of practical telegraphy, by W. Whitehouse, 1856, 19.
—— currents, induced, W. S. Ward on a theory of, 1849, 46.
—— currents, secondary, on the heating effects of, by J. P. Gassiot, 1854, 68.
—— currents by which the phenomena of terrestrial magnetism may be produced, Prof. W. Thomson on the, 1847, 38.
—— currents, transitory, Prof. Marianini on the magnetizing action of, 1842, 27.
—— currents through platinum wire, Dr. Barker on, 1835, 33.
—— fishes, Sir J. Richardson on, 1857, 115.
—— fishes, on the employment of, as medical shock-machines, by Prof. G. Wilson, 1857, 115.
—— fluid, Rev. T. Rankin on the different motions of the, 1860, 30.
—— fluid, Rev. T. Exley on the motion of the, along conductors, 1848, 52.
—— (hydro-) chain battery, M. Pulvermacher's, 1851, 52.
—— (hydro-) machine, W. G. Armstrong on a, 1845, 30.
—— lamp, improved, 1858, 55.
—— light, M. Serrin on an automatic regulator for the, 1860, 19.
Electric light of mercury, Dr. J. H. Gladstone on the chromatic properties of the, 1860, 13.
—— origin of the heat of combustion, J. P. Joule on the, 1842, 31.
—— qualities of magnetized iron, Prof. W. Thomson on the, 1855, 19.
—— semaphore for use on railways, W. S. Ward on an, 1853, 131.
—— telegraph, copying, Mr. Bakewell on the, 1851, 11.
—— telegraph, on rendering it subservient to meteorological research, by J. Ball, 1848, 12.
—— telegraph wires, Rev. T. Exley on the cause of the transmission of electricity along, 1853, 38.
—— telegraphs, submarine, C. W. Siemens and M. Werner on the principles and practice involved in dealing with the electrical conditions of, 1860, 32.
—— transfer, A. Crosse on the mechanical action accompanying, 1854, 66.
Electrical appearances, extraordinary, P. Clare on some, 1850, 31.
—— attraction, Sir W. S. Harris on some new phenomena of, 1833, 386.
—— attraction, Sir W. S. Harris on, 1835, 17.
—— attraction, Sir W. S. Harris on the general nature and laws of, 1847, 23.
—— balance, Sir W. S. Harris on an, 1837, 17.
—— battery, new, W. Symons on a, 1854, 75.
—— currents in the earth's surface, A. H. Hamilton on the, 1857, 48.
—— currents, Dr. G. Bird on their influence in arranging the materials of mineral veins, 1837, 46.
—— currents in metalliferous veins, Prof. Reich's researches on the, 1839, 34.
—— currents, Prof. Matteucci on the distribution of, in the rotating disc of M. Arago, 1853, 5.
—— discharge, Sir W. S. Harris on a general law of, 1848, 19.
—— discharge, W. R. Grove on the stratified appearance of the, 1856, 10.
—— discharge, stratified, as affected by a moveable glass ball, J. P. Gassiot on the, 1859, 11.
—— discharges in a vacuum made in flint and potash glass, J. P. Gassiot on the phosphorescent appearance of, 1858, 26.
—— discharges, induced, taken in aqueous vapour, J. P. Gassiot on, 1858, 26.
—— discharges observed in highly rarefied carbonic acid in contact with potash, J. P. Gassiot on, 1858, 50.
—— eel, on the employment of the, as a medical shock-machine by the natives of Surinam, by Prof. G. Wilson, 1859, 158.
—— experiments, A. Crosse's, 1836, 47.
—— and magnetic force, Sir W. S. Harris on the law of, 1856, 11.

Electrical force, Sir W. S. Harris on, 1860, 28.
—— forces, R. Hunt on the influence of actinism in disturbing, 1845, 29.
—— "frequency," Prof. W. Thomson on, 1859, 26.
—— images, Prof. W. Thomson on, 1847, 6.
—— indications during day thunderstorms, Prof. W. Thomson on, 1860, 54.
—— light, Prof. Wheatstone on the prismatic decomposition of, 1835, 11.
—— machine, new, J. Nott on a, 1843, 15.
—— phenomena in vacuo, Mr. Potter on, 1831–32, 84.
—— phenomena in the United States, Prof. Loomis on, 1857, 32.
—— potentials and capacities, on new instruments for measuring, by Prof. W. Thomson, 1855, 22.
—— repulsion, Sir W. S. Harris on, 1836, 19.
—— researches, by Prof. Henry, 1837, 22.
—— transfer, on the apparent mechanical action accompanying, by Mrs. Crosse, 1855, 55.
—— vacuum-tubes, Prof. W. B. Rogers on the phenomena of, 1860, 30.
Electricity, Rev. J. G. MacVicar on, 1833, 390.
——, C. J. Kennedy on the theory of, 1840, 24.
——, atmospheric, A. Crosse on, 1836, 48.
——, atmospheric, Prof. W. Thomson on, 1860, 53.
—— of the atmosphere, J. Nott on the, 1843, 15.
—— of the atmosphere, Prof. Wheatstone on Prof. Quetelet's investigations relating to the, 1849, 11.
——, atmospheric, on Dellman's method of observing, by Prof. W. Thomson, 1856, 17.
——, atmospheric, on the necessity for incessant recording, and for simultaneous observations in different localities, for the investigation of, by Prof. W. Thomson, 1859, 27.
——, atmospheric, on the detection and measurement of, by M. J. Johnson, 1855, 40.
—— of the atmosphere, instrument for measuring, 1837, 38.
——, common and atmospheric, Dr. T. Andrews on the polar decomposition of water by, 1855, 46.
——, current, W. Petrie on the dynamic equivalent of, and on a fixed scale for electromotive force in galvanometry, 1850, 185.
——, dynamic, on the correlation of, and the other physical forces, by L. Soret, 1857, 16.
——, statical, W. Thomson on the elementary laws of, 1845, 11.
——, voltaic and ordinary, J. Goodman on the cause of dissimilarity of the, 1842, 18.
Electricity, voltaic and ordinary, light, and heat, J. Goodman on the analogy of the existences or forces, 1844, 11.
——, light, heat, magnetism, and gravitation, on the identity of the existences or forces of, by J. Goodman, 1848, 53.
—— and heat, on the application of, as moving powers, by W. Petrie, 1850, 183.
—— and heat, Sir G. C. Haughton on the antagonism of, and on the singleness of the electric fluid, with remarks on conduction and induction, 1847, 27.
—— and heat, on an analogy between, by Rev. Prof. Chevallier, 1855, 10.
——, F. C. Bakewell on the conduction of, through water, 1851, 6.
——, on its transmission through water, by J. B. Lindsay, 1859, 13.
——, on the cause of the transmission of, along conductors generally, by Rev. T. Exley, 1853, 38.
——, W. R. Grove on the conduction of, by flame and gases, 1853, 42.
—— of high-pressure steam, W. Armstrong on the, 1843, 39.
——, W. G. Armstrong on some phenomena attending the production of, by steam, 1845, 30.
—— of high intensity, Rev. Prof. M'Gauley on electro-magnetic apparatus for the production of, 1837, 24.
—— of tension in the voltaic battery, J. P. Gassiot on the, 1846, 47.
——, Prof. Henry's investigations to detect an inductive action in, 1837, 22.
——, Prof. W. Thomson on certain magnetic curves with application to the theory of, 1852, 18.
——, W. H. Barlow on the existence of alternating diurnal currents of, at the terrestrial surface, and their connexion with the diurnal variation of the magnetic needle, 1847, 21.
—— of the copper vein in Huel Jewel mine, R. W. Fox on the, 1834, 572.
——, application of the proof plane and torsion balance to, 1835, 18.
——, W. Black on its influence on the process of brewing, 1837, 58.
Electrified spherical conductors, Prof. W. Thomson on the mutual attraction between two, 1852, 17.
Electro-chemical action, R. Hunt on, 1844, 35.
—— decomposition, Professor Faraday on, 1833, 393.
—— researches, new, by Prof. Schönbein, 1839, 31.
Electrodes, polarized, on the influence of light on, by W. R. Grove, 1858, 17.
—— of a voltameter, Rev. Dr. Robinson on the influence which finely divided platina exerts on the, 1846, 46.
Electro-dynamic induction machine, Rev. Prof. Callan on the, 1857, 11.

Electrolysing power of a simple voltaic circle, Prof. Schönbein on the, 1842, 30.
Electrolysis across glass, W. R. Grove on the transmission of, 1860, 59.
—— of water, Rev. Dr. Robinson on the, 1847, 52.
——, on the quantity of, as affected by the extent of the sectional area of the electrolyte, W. R. Grove on the, 1847, 52.
Electrolysotype, a new photographic process, Dr. T. Woods on the, 1844, 36.
Electro-magnet, large, experiments with a, by J. P. Joule, 1855, 12.
Electro-magnetic apparatus for the production of electricity of high intensity, Rev. Prof. M'Gauley on, 1837, 24.
—— currents, M. De la Rive on the interference of, 1837, 27.
—— induction, Prof. W. Thomson on the theory of, 1848, 9.
—— instruments, Rev. Prof. Cumming on, 1833, 418.
—— machines, J. Cunningham on powerful magnets for, 1837, 38.
—— machines, Prof. Jacobi on the principles of, 1840, 18.
—— and vital laws, Dr. Bullar on the identity of certain, 1846, 29.
Electro-magnetism, W. Sturgeon on, 1831-32, 569.
——, Prof. Wartmann's experiments on, 1846, 27.
——, R. Mallet on its application to manufactures, 1835, 18.
—— applied to machinery, Rev. Prof. M'Gauley on, 1836, 24.
——, Messrs. Bond on apparatus for making astronomical observations by means of, 1851, 21.
Electro-medical apparatus, new, M. Ruhmkorff's, 1859, 62.
Electrometer, Peltier's, mode of operating with, 1849, 12.
——, Sir W. S. Harris's, 1833, 386.
——, new, Prof. W. Thomson on a, 1855, 22.
——, electroscopic, Prof. W. Thomson on an, 1855, 22.
Electro-physiology, Prof. Matteucci's experiments on, 1844, 38.
——, Prof. Matteucci's researches in, 1846, 28.
Electro-platymeter, Prof. W. Thomson on an, 1855, 22.
Electroscope, Sir W. S. Harris's, 1833, 386.
Electro-telegraphic communication in England, Prussia, and America, F. Whishaw on, 1849, 133.
Electrotype, Prof. Jacobi on his discovery of, 1840, 89.
——, method of, by which the deposition on minute objects is easily accomplished, by L. L. B. Ibbetson, 1844, 39.
—— processes, new, by the Abbé Moigno, 1857, 54.
Elementary bodies, Prof. Draper on a change, produced by exposure to the beams of the sun, in the properties of, 1843, 9.
Elephant-remains at Ilford, A. Brady on the, 1859, 100.
Elephantine animals of India, fossil; Dr. Falconer on the, 1845, 62.
Elephants' tusks found in the Strond Valley, Gloucester, notice of, by Prof. Buckman, 1854, 78.
Elliptic analyser, new, Prof. Stokes on a, 1851, 14.
—— integration, R. Rawson on, 1849, 4.
Ellisia, a new genus of British zoophytes, Prof. E. Forbes and J. Goodsir on, 1839, 81.
Elm-trees, Mr. Niven's experiments upon, 1837, 102.
Emarginula crassa, new to the British seas, 1844, 64.
Embryo, G. Newport on the evolutions of vital force in the, 1850, 133.
—— of Purpura lapillus, Dr. W. B. Carpenter on the development of the, 1854, 108.
—— state of Palinurus vulgaris, R. Q. Couch on the, 1857, 102.
Embryo of flowering plants, on the development of the, by Prof. Henfrey, 1856, 85.
Embryos, on their plurality and development in the seeds of Coniferæ, by Dr. R. Brown, 1834, 596.
Embryology, J. R. Greene on, with reference to the mutual relations of the subkingdoms of animals, 1860, 132.
Emigration from the United Kingdom, and from France and Germany, W. Newmarch on, 1855, 183.
—— from the United Kingdom, on the progress of, by J. T. Danson, 1849, 88.
Empyema, Dr. Macgowan on, 1841, 82.
——, W. J. Square on a case of, 1841, 82.
Emulsin, Prof. T. Thomson and T. Richardson on, 1838, 48.
Encephalon, Dr. Carpenter on the physiology of the, 1846, 92.
Encrinus moniliformis, G. B. Sowerby on certain monstrosities of, 1838, 115.
Endochrome, Prof. Allman on the structure of the, in Conferva linum, 1853, 62.
——, Prof. Allman on the utricular structure of the, in a species of Conferva, 1853, 62.
Endosmose and exosmose, Dr. Lesson on the influence of galvanism on, 1845, 83.
—— and exosmose, Rev. J. Power on the cause of, 1833, 391.
Endosmosis, on some curious effects of, by R. Garner, 1859, 162.
Engine, momentum, W. Gorman on a, 1855, 206.
——, rotary, Rev. Prof. M'Gauley on a, 1849, 118.

Engines, locomotive, on wrought-iron wheels for, 1840, 212.
——, marine, double cylinder expansion, J. Elder on, 1858, 211.
——, marine, on a method of condensing steam in, by J. T. Price, 1851, 116.
—— of the Callao, Lima, and Bogota, J. Elder on the, 1859, 231.
English language, J. Crawfurd on the oriental words adopted in, 1849, 84.
Engraving-machine, W. West's, notice of, 1840, 211.
Entomology, J. O. Westwood's remarks on, 1845, 64.
Entomostraca, Prof. Allman on the development of Notodelphys, a new genus of, 1847, 74.
Entozoa found in the muscles of the human subject, Prof. Harrison on the, 1835, 84.
——, cystic, on the structure and development of the, 1844, 67.
——, Nematoid, on the fluid system of the, by Dr. T. Williams, 1856, 101.
Eocene beds, freshwater, of the Hordle Cliffs, Hampshire, Marchioness of Hastings on the, 1847, 63.
—— freshwater formation at Hordwell, Hants, Prof. Owen on new fossil mammalia from the, 1851, 67.
—— period, the first instance of the occurrence of quadrumanous mammals in deposits of the, 1839, 70.
——, upper, of Hordwell, Hants, Prof. Owen on a new species of Anoplotherioid mammal (Dichobune ovinum) from the, 1856, 72.
——, upper, of the Isle of Wight and Hordwell, Hants, Prof. Owen on the Dichodon cuspidatus from the, 1856, 72.
Eolida coronata, new species, 1839, 80.
—— foliata, new species, 1839, 80.
—— minima, new species, 1839, 80.
—— zetlandica, new species, 1839, 80.
Eolis, notices of new species of, by J. Alder, 1842, 69.
Epidemic, peculiar, affecting the teeth and gums of young children, Dr. Duncan on a, 1845, 82.
Epilepsy, Dr. Newbiggin on the influence of Croton oil in, 1840, 156.
Epithelial cells of the small intestines, on a peculiar structure discovered in the, by Prof. Kölliker, 1855, 126.
Equation, algebraic, Prof. Sylvester on the relation of Sturm's auxiliary functions to the roots of an, 1841, 23.
—— of Laplace's functions, G. Boole on the, 1845, 2.
——, Prof. Sylvester on the expressions for the quotients which appear in the application of Sturm's method to the discovery of the real roots of an, 1853, 1.
Equations, algebraic, Mr. Peebles on the expressibility of the roots of, 1840, 54.
——, F. Bashforth on a machine for finding the numerical roots of, 1845, 3.
Equations, indeterminate linear, Prof. H. J. S. Smith on systems of, 1860, 6.
—— of the fifth degree, Sir W. R. Hamilton's exposition of the argument of Abel respecting, 1837, 1.
——, supplement to Newton's method of resolving, by the Abbé Moigno, 1859, 9.
Equatorial instruments, W. S. Jacobs on a folding dome for, 1850, 180.
—— mounting as applicable to large telescopes, T. Grubb on the several varieties of, 1857, 8.
—— mounting for telescopes, Rev. Prof. Powell on an, 1849, 2.
—— mounting, Prof. Piazzi Smyth on a new form of, for the Edinburgh observatory, 1850, 187.
—— stand, portable, for telescopes without polar axis, Dr. R. Greene on an, 1846, 8.
Equilibration, Dr. W. Wallace on the catenary and curves of, 1840, 190.
Equilibrium of floating bodies, M. Davidow on the theory of, 1847, 1.
—— and motion, on the fundamental laws of, 1847, 5.
——, on the conditions of, in a rotating spheroid, by Dr. Siljeström, 1858, 5.
Equinoctial week, vernal, M. Du Boulay on the meteorological phenomena of the, 1860, 39.
Erbium, a new metal, Prof. Mosander on, 1843, 25, 30.
'Erebus' and 'Terror,' report of a searching party down the Great Fish River in quest of the crews of the, 1857, 148.
Erosion, on the great terrace of, in Scotland, and its relative date and connexion with glacial phenomena, by R. Chambers, 1854, 78.
—— of rivers in India, H. and R. Schlagintweit on, 1857, 90.
Erosions of the earth's surface, Rev. Dr. Hitchcock on the, 1850, 85.
Erratic blocks, R. Griffith on the distribution of, in Ireland, 1843, 40.
Erysipelas, J. Goodman on the physiological condition of the blood in, 1847, 94.
——, phlegmonous, Sir D. J. H. Dickson on a case of, 1839, 95.
Erythrarsin, a product of the decomposition of kakodyle, Prof. Bunsen on, 1841, 56.
Erythrin, on some products of the decomposition of, by Dr. E. Schunck, 1844, 31.
'Eskers' of the central part of Ireland, R. Young on the, 1852, 63.
Esquimaux race, southern limits of the, in America, 1844, 78.
Etching steel or copper plates by the photographic process, Prof. A. C. Ramsay on a process for, 1855, 69.
Ether, Dr. C. Kidd on the nature of death from, 1860, 136.

Ether from alcohol, Prof. A. W. Williamson on making, 1850, 65.
——, new, Dr. Hare on a, 1838, 39.
Ethno-epo-graphy, Rev. T. Myers on, 1844, 84.
Ethnographical note on the vicinity of Charnwood Forest, by Prof. Phillips, 1848, 99.
Ethnological bearing of the discoveries in connexion with the Assyrian inscriptions, Rev. Dr. Hincks on the, 1852, 85.
—— boulders, and their probable origin, Rev. Dr. Hincks on, 1860, 156.
—— Inquiry, manual of, by R. Cull, 1855, 141.
—— outlines of France, by R. de Vericour, 1847, 127.
—— questions connected with the coasts of Livonia, Esthonia, Courland, and Gothland, Dr. Latham on, 1853, 86.
Ethnology, R. von Schlagintweit on some of the Aborigines of India and High Asia, 1860, 175.
Ethyle, on the physiological properties of, by Dr. Turnbull, 1854, 76.
Etruscans of the Rhætian Alps, Dr. W. Freund on the, 1854, 126.
Euclid's "Reductio ad absurdum," on the origin and elimination of, by J. P. Hennessy, 1857, 3.
Eudiometer, aqueous sliding-rod hydrogen, Dr. R. Hare on the, 1836, 46.
Eudiometrical experiments, Dr. R. Hare on a calorimotor for igniting gases in, 1836, 45.
—— purposes, C. T. Coathupe on a method of graduating glass tubes for, 1839, 62.
Eulima Macandræi, new species, 1844, 64.
Euphrates line of communication with India, Col. Chesney on the, 1852, 104.
Eupion, a product of destructive distillation, Dr. Reichenbach on, 1834, 591.
European races, on the tendency of, to become extinct in the United States, by E. Clibborn, 1856, 136.
Eurypterus, new species of, from the old red sandstone of Herefordshire, Rev. W. S. Symonds on a, 1857, 93.
Examinations, public service, academic, and teachers', J. Heywood on, 1858, 176.
——, Society of Arts', on the results of the, by J. P. Hennessy, 1858, 180; 1859, 214.
Exercise, A. Maclaren on its influence on physical growth and development, 1860, 142.
Exeter amygdaloid, Rev. D. Williams on the, 1844, 55.
Exosmose and endosmose, Rev. J. Power on the cause of, 1833, 391.
Exostosis, Dr. Lonsdale on, 1840, 165.
Expansion of metals, alloys, and salts, Prof. F. C. Calvert on, 1858, 46.
—— of solids by heat, R. Roberts on the, 1850, 16.
—— of stone by the application of heat, A. J. Adie on the, 1834, 569.
Expectoration, in different diseases of the lungs, R. H. Brett on the physical and chemical characters of, 1837, 125.
Explosions in mines, Dr. Arnott on preventing, 1837, 54.
Explosive liquid, nitroglycerine, Dr. Gladstone on, 1856, 52.
Eye, experimental researches on the, by Dr. A. Waller, 1856, 100.
——, W. Bowman on some points in the anatomy of the, 1847, 91.
——, on the structure of the choroid coat of the, and more particularly on the character and arrangement of the pigmentary matter, by T. Nunneley, 1858, 141.
——, on the structure of the retina at the punctum centrale, by T. Nunneley, 1858, 141.
——, Sir D. Brewster on two new properties of the retina, 1845, 8.
——, discovery of fibres in the retina, by Mr. C. Wallace, 1838, 15.
——, on pictorial and photochromatic impressions on the retina of the, by Rev. Dr. Scoresby, 1854, 12.
——, Sir D. Brewster on the compensation of impressions moving over the retina, as seen in railway travelling, 1848, 47.
——, on the duration of luminous impressions on certain points of the retina, by Sir D. Brewster, 1858, 6.
——, on the visual impressions upon the foramen centrale of the retina, by Sir D. Brewster, 1848, 48.
——, Sir D. Brewster on the effect of compression and dilatation upon the retina, 1831-32, 553.
——, on the undulations excited in the retina by the action of luminous points and lines, by Sir D. Brewster, 1831-32, 549.
——, Dr. A. Waller on the luminous spectra excited by pressure on the retina, 1848, 82.
——, Sir D. Brewster on the line of visible direction along the axis of vision, 1840, 9.
——, Dr. A. Waller on impaired vision in which objects appear much smaller than natural, 1848, 82.
——, on a case of binocular vision, by Rev. J. Dingle, 1858, 14.
——, on a peculiarity of vision, by Rev. Prof. Powell, 1852, 11.
——, on binocular vision, and on the stereoscope, by Prof. Wheatstone, 1838, 16.
——, Sir D. Brewster on an ocular parallax in vision, and on the law of visible direction, 1838, 7.
——, on vision through the foramen centrale of the retina, by Sir D. Brewster, 1858, 7.
——, on the powers of minute vision, by W. Petrie, 1850, 183.
——, on the vision of distance as given by colour, by Sir D. Brewster, 1848, 48.

Eye, Sir D. Brewster on a case of vision without retina, 1852, 3.
——, on Bishop Berkeley's Theory of Vision, by Sir D. Brewster, 1848, 49.
——, on the accommodation of the, to various distances, by Sir D. Brewster, 1844, 10.
——, on the unequal sensibility of the foramen centrale to the light of different colours, by Prof. J. C. Maxwell, 1856, 12.
——, Rev. Prof. Powell on the achromatism of the, 1833, 374; 1834, 548.
——, Prof. Wartmann on Daltonism (indistinct vision of colours), 1841, 40.
——, G. H. Fielding on a new membrane (membrana versicolor) in the, 1831–32, 602.
——, Sir D. Brewster on the functions of the membranes of the, at the foramen centrale of Soemmering, 1847, 33.
——, P. B. Lucas on two new fascise connected with the muscles of the, 1841, 80.
——, Dr. Prichard on a case of amaurosis, 1836, 108.
——, on a mode of measuring the astigmatism of a defective, by Prof. Stokes, 1849, 10.
——, operation for artificial pupil, R. Middlemore on the, 1839, 96.
——, on capsular cataract, by R. Middlemore, 1839, 96.
——, Sir D. Brewster on the cause, prevention, and cure of cataract, 1836, 111.
——, Dr. R. D. Thomson on opacity of the cornea produced by sulphuric acid, 1840, 164.
——, Dr. Ure on the operation for squinting, 1840, 163.
——, Sir D. Brewster on the cause of the optical phenomena in the crystalline lens during the absorption of distilled water, 1837, 11.
——, Sir D. Brewster on the phenomena and cause of the muscæ volitantes, 1840, 8.
——, Sir D. Brewster on the polarizing structure of the, 1850, 5.
——, Sir D. Brewster on Mr. C. Wallace's preparations of the, 1838, 14.
—— of birds and reptiles, T. Allis on the sclerotic bones forming the orbit of the, 1837, 98.
—— of the shark, Sir J. F. W. Herschel on the structure of the vitreous humour of the, 1838, 15.
Eyes, Prof. W. B. Rogers on their inability to determine which retina is impressed, 1860, 18.
Eyeball, J. Walker on the muscles and nerves of the, 1836, 121.
——, on the form of the, and the relative position of the entrance of the optic nerve into it, in different animals, by T. Nunneley, 1858, 139.
Eyepiece, solid, Rev. J. B. Reade on a, 1850, 15.
Ezekiel, notes of an excursion to the supposed tomb of, by T. K. Lynch, 1853, 89.

Factory life, its influence on the health of the operative, by Dr. A. G. Malcolm, 1855, 171.
Fairy-rings of pastures, Prof. J. T. Way on the, 1846, 43.
——, Prof. Buckman on the, 1849, 70.
Falco islandicus and F. groenlandicus, J. Taylor on, 1859, 158.
Falcons of Greenland and Iceland, J. Hancock on the, 1838, 106.
Falling bodies, Prof. Oersted on the deviation of, from the perpendicular, 1846, 2.
Fallow crops, Rev. J. B. Reade on Liebig's theory of, 1842, 64.
Faraday's lines of force, on a method of drawing the theoretical forms of, without calculation, by Prof. J. C. Maxwell, 1856, 12.
Fascination, on the physiology of, by J. Braid, 1855, 120.
Fasciola gigantica, a new species of Trematode worm, Dr. T. S. Cobbold on, 1855, 108.
Fata Morgana of Ireland, Mr. M'Farlane on the, 1852, 29.
Fan-blast, as applied to furnaces, W. Fairbairn on the, 1840, 199.
Fans for causing blasts of air, Prof. J. Thomson on some properties of whirling fluids, with their application in improving the action of, 1852, 130.
Fat, on its absorption into the system, by Prof. Kölliker, 1855, 126.
Fault, singular, in the southern termination of the Warwickshire coal-field, C. Twamley on a, 1853, 62.
Faults, and anticlinal and synclinal axes, J. Leithart on, 1838, 89.
Fauna, marine, of Britain, Prof. E. Forbes on additions discovered by R. M'Andrew, 1845, 66.
——, marine, of Cornwall, C. W. Peach on the, 1845, 65; 1847, 78.
——, molluscous, of the Azores and St. Helena, Prof. E. Forbes on the, 1851, 76.
——, British molluscous, on the addition of the order Nucleobranchia to the, by Prof. E. Forbes, 1843, 72.
—— in the Ægean Sea, Lieut. Spratt on the influence of temperature upon the distribution of the, 1848, 81.
—— of the Clyde, Rev. Dr. C. P. Miles on the, 1855, 114.
—— of Ireland, W. Thompson on the, 1846, 83; 1847, 80; 1848, 125.
—— of Liverpool, J. Byerly on the, 1854, 107.
—— of Sweden, Prof. Nilsson on changes in the, 1847, 79.
——, invertebrate, of the lower oolites of

Oxfordshire, J. F. Whiteaves on the, 1860, 104.
Faussett Collection, on a Roman sepulchral inscription on an Anglo-Saxon urn in the, by C. R. Smith, 1855, 145.
Fassoglo language, Dr. Tutschek on a vocabulary of the, 1847, 126; 1848, 100.
—— words from Dr. Tutschek's vocabulary, Dr. Latham on some, 1847, 124.
Fecundation in different animals, Dr. A. Thomson on, 1855, 139.
Fellenberg's labour-school, for beggar boys and criminals, notice of, 1855, 179.
Fen lands and marshes, J. Glynn on the application of steam power to the drainage of, 1848, 117.
Fens and submarine forests of Lincolnshire, Rev. E. Trollope on the, 1858, 113.
Fermentation, Dr. Ure's experiments on, 1839, 59.
Fern stems, Dr. G. Ogilvie on the structure of, 1860, 112.
——, fossil (Cyclopteris hibernica, Forbes), 1858, 75.
——, new fossil, from the coal-measures near Glin, co. Limerick, W. H. Baily on a, 1857, 63.
Ferns and flowering plants of Great Britain, attempt to classify the, by J. G. Baker, 1855, 99.
——, on the vegetative axis of, by Dr. G. Ogilvie, 1859, 139.
——, T. Allis on the cultivation of, 1844, 73.
Ferrocyanate of potash, R. Hunt on its influence on the iodide of silver as a photographic preparation, 1841, 47.
Ferromagnetic substance, Prof. W. Thomson on the equilibrium of elongated masses of, in uniform and varied fields of force, 1852, 18.
Ferrotype, a new photographic process, R. Hunt on the, 1844, 35.
Fever, typhus, Dr. Perry on, 1835, 101.
——, on the use of chloride of soda in, 1835, 104.
Fevers, contagious, Dr. Perry on, 1840, 160.
Fibres, Indian, J. H. Sadler on, 1858, 195.
Fibrine of human blood, Dr. Buchanan on, 1840, 156.
Fibrous substances, on the comparative value of certain salts for rendering them non-inflammable, by F. Versmann and Dr. Oppenheim, 1859, 86.
Filaria, Rev. F. W. Hope on, 1837, 97.
Filter, self-cleaning, Mr. Thom on a, 1840, 207.
Filtering liquids, Mr. Beart on a method of, 1839, 131.
—— water, J. T. Hawkins on methods of, 1838, 163.
Filtration by sponge, notice of Starkey's system of, 1843, 101.
Finns and Lapps in Norway, table of the, according to the census returns, by Dr. L. K. Daa, 1856, 139.
Fire, G. Gurney on the possibility of, from the use of hot water in warming buildings, and of explosions in steam-engine boilers, 1841, 49.
Firearms, C. T. Coathupe on an improved sight for, 1841, 104.
Fireclay of the coal-measures, Prof. Johnston on the, 1853, 52.
Firedamp, Prof. Ansted on accidents which occur in coal-mines from the explosion of, 1845, 53.
Fire-grate, Mr. Jeffreys on a, 1840, 213.
Firestone of Surrey, Prof. Johnston on the, 1853, 52.
Firs and pines, Rev. Prof. M'Cosh on the morphology of, 1854, 99.
Fish and marine animals in salt water, 1853, 72.
——, C. W. Peach on the habits of, in relation to certain forms of Medusæ, 1853, 70.
——, Prof. R. Jones on an apparatus for observing them in confinement, 1839, 93.
——, gregarious, Dr. Knox on the natural history of certain, 1846, 79.
——, J. Couch on the egg-purse and embryo of a species of Myliobatus, 1846, 80.
——, Dr. Macdonald on the structure of, 1840, 131.
——, Prof. Owen on the structure of the teeth of, 1838, 137.
——, morphology of the muscular system in, 1850, 138.
——, Prof. Agassiz on their development in the egg, 1840, 129.
——, on the structure of the ova of, by Dr. W. H. Ransom, 1855, 131.
——, sclerotic plates in, T. West on the, 1844, 63.
—— with four eyes, 1838, 110.
——, jelly, notice of, by Dr. Lankester, 1853, 69.
——, transparent (Leptocephalus vitreus and Helmichthys diaphanus), from Messina, Prof. Kölliker on, 1855, 111.
——, marine, Sir J. Richardson on three new genera of, from Van Diemen's Land, 1841, 71.
——, on the Coregoni of Scotland, by Sir W. Jardine, 1855, 111.
——, British, new and rare, Dr. Parnell on some, 1838, 108, 109.
—— of the Lake district, some observations on the, by Dr. J. Davy, 1858, 122.
—— of Yorkshire, T. Meynell on the, 1844, 62.
——, osseous, Dr. Handyside on the Sternoptixinæ, a family of, 1838, 110.
——, electric (Malapterurus beninensis), A. Murray on the, 1855, 114.
——, electric, Sir J. Richardson on, 1857, 115.
—— for museums, on the preparation of 1839, 82, 84.

Fish, Dr. Knox on Thibert's method of modelling and colouring after nature all kinds of, 1846, 80.
Fish-rain at Aberdare, Rev. W. S. Symonds on the, 1859, 158.
Fishes, fossil, M. Agassiz on, 1835, 61.
——, fossil, of N. Brazil, 1840, 118.
——, fossil, from the North Staffordshire coal-fields, W. Molyneux on the, 1860, 88.
——, remains of, in the triassic drift in the neighbourhood of Frome, C. Moore on the, 1860, 87.
——, remains of, in the coal strata of North Staffordshire, R. Garner on the, 1859, 105.
——, Rev. D. Williams on the discovery of the remains of, at the base of the mountain limestone near Bristol, 1842, 60.
——, fossil, of Dura Den, Rev. Dr. Anderson on the, 1850, 70.
——, fossil, of Orkney, Dr. Traill on the, 1834, 646.
——, fossil, of Scotland, Prof. Agassiz on the, 1834, 646.
—— of the old red sandstone, Sir R. I. Murchison on the, 1834, 652; 1840, 99.
——, fossil, of the lower old red sandstone of Scotland, Hugh Miller on the, 1850, 91.
——, fossil, Prof. M'Coy on the structure of the, found in the old red sandstone of the north of Scotland, 1852, 55.
——, fossil, found at Peterhead, on some, 1852, 78.
—— found in the old red sandstone deposits of Farnell, Forfarshire, Sir P. de M. G. Egerton on the, 1860, 77, 89.
—— of the London clay, Prof. Agassiz on the, 1846, 52.
—— of the Ludlow rocks, Sir R. I. Murchison on the, 1837, 91.
——, fossil scales of, A. Connell's analysis of, 1835, 41.
——, sauroid, Sir D. Brewster on the fossil teeth of, 1838, 90.
Fisher's Venetian screw propeller, 1854, 151.
Fisheries, British, Prof. R. Jones on the, 1839, 93.
——, Irish Sea, R. Valpy on the resources of the, 1847, 110.
—— of the coasts of Ireland, W. Andrews on the, 1857, 101.
——, herring, on the fluctuations in the, by J. Cleghorn, 1854, 134, 176.
——, herring, J. M. Mitchell on the importance of the, 1860, 191.
——, whale and seal, of Greenland and Davis Straits, carried on by vessels from Peterhead, 1859, 216.
Fishing in the west of Guiana, Sir R. Schomburgk on the modes employed by the Indians in, 1840, 135.
FitzRoy's (Capt.) views of the tides, Rev. Dr. Whewell's observations on, 1839, 11.
Fizeau's process of etching Daguerreotype plates, A. Goadby on, 1845, 76.
Flagstones, Yorkshire, and their fossils, W. Baines on the, 1858, 78.
Flame from coal-gas, R. Mallet on the phenomena of, 1835, 49.
—— of a candle, E. R. J. Knowles on an extraordinary appearance in the, 1846, 49.
——, oxyhydrogen, C. J. Jordan on increasing the intensity of the, 1844, 33.
Flames, Sir D. Brewster on luminous lines in, corresponding to the defective lines in the sun's light, 1842, 15.
——, Sir D. Brewster on the luminous bands in the spectra of various, 1842, 15.
Flamsteed's 'Historia Cœlestis,' F. Baily's account of some MS. letters relative to, 1833, 462.
Flax and cotton fibres, Prof. F. C. Calvert on the action of citric, tartaric, and oxalic acids on, 1854, 65.
——, New Zealand, M. Whytlaw on a new method of scutching, 1852, 132.
—— spinning in England, especially as developed in Leeds, sketch of the history of, by J. G. Marshall, 1858, 184.
—— steeps, warm-water, Prof. Allman on the development of ferment-cells in the, 1852, 64.
Flint, vertical lines of, Sir C. Lyell on, 1838, 87.
—— gravel of the neighbourhood of Cambridge, Rev. Prof. Sedgwick on the, 1845, 44.
—— implements of Amiens and Abbeville, Sir C. Lyell on the, 1859, 94.
—— instruments, &c. of Kent's Cavern, E. Vivian on the, 1856, 119.
Flints of Aberdeenshire, notice of the, 1834, 651.
——, chalk, from the boulder-clay in Caithness, Hugh Miller on, 1851, 93.
Floating bodies, M. Davidow on the theory of equilibrium of, 1847, 1.
—— bodies, R. Rawson on the oscillations of, 1849, 5.
—— bodies, J. S. Russell on the motion of, 1835, 16.
Floatwater, buoyant, Capt. Sleigh's, 1843, 102.
Flora of Aberdeenshire, Prof. Dickie on the, 1859, 134.
——, Arctic, J. Taylor on the, 1859, 140.
—— of Britain, Miss Twining on the comparison of the, with that of other countries, 1847, 87.
——, British, additions to the, 1839, 92; 1848, 84.
—— of the British Isles, Prof. Balfour on the, 1855, 100.
—— of Devon and Cornwall, Rev. W. S. Hore on the, 1841, 75.
—— of Guernsey and Jersey, 1837, 103.
—— of India, Prof. Royle on the geographical distribution of the, 1846, 74.

Flora of Ireland, additions to the, 1846, 90.
—— of the south and west of Ireland, Prof. Balfour on the, 1852, 64.
—— of Scotland, Prof. Balfour on the, 1855, 100.
—— of Yorkshire, on the, 1844, 70.
Floras, fossil, of Scotland, Hugh Miller on the, 1855, 83.
Flos maris, a new British zoophyte, 1839, 81.
Flour and meal from the potato, J. W. Rogers on, 1857, 57.
Flowers, Prof. Agardh on the structure of, 1833, 433.
——, lime, T. J. Pearsall on, 1853, 45.
Flues, descending, J. N. Hearder on their application to the purposes of ventilation, 1841, 105.
Fluid, on the figure of an imperfectly elastic, by Prof. Hennessy, 1859, 5.
——, Prof. Stokes on the resistance of a, to two oscillating spheres, 1847, 6.
——, volatile, W. C. Jones on a peculiar, 1836, 75.
—— motion, Prof. W. Thomson on certain magnetic curves with application to the theory of, 1852, 18.
Fluids, J. S. Russell on a new law of the resistance of, to the motion of floating bodies, 1834, 531.
——, on the resistance of, to the motion of floating bodies, by J. S. Russell, 1835, 16.
——, on the motion of: a remarkable variation in the great elementary law of the ratio between pressure and velocity, by W. Petrie, 1854, 63.
——, Prof. Hennessy on the solidification of, by pressure, 1857, 25.
——, Rev. J. Brodie on a new mode of propelling, 1840, 190.
——, whirling, Prof. J. Thomson on some properties of, with their application in improving the action of blowing fans, centrifugal pumps, and certain kinds of turbines, 1852, 130.
——, elastic, Dr. Apjohn on the specific heat of, 1835, 30.
——, elastic, J. P. Joule on the constitution of, 1848, 21.
——, G. Buchanan on improvements in valves, stopcocks or stoppers for regulating the passage of, 1850, 171.
Fluor-spar, Sir D. Brewster on a new phenomenon of colour in, 1838, 10.
Fluorescence and phosphorescence of diamonds, Dr. J. H. Gladstone on the, 1859, 69.
Fluorescent substances, on photographs of, by Dr. J. H. Gladstone, 1859, 69.
Fluoric acid, Dr. G. O. Rees on the existence of, as a constituent of certain animal substances, 1839, 56.
—— acid gas, on engraving collodion photographs by means of, by C. Pooley, 1856, 58.
Fluoride of calcium, Dr. G. Wilson on the extent to which it is soluble in water, 1846, 38; 1850, 68.
Fluorine, Rev. T. Knox on the insulation of, 1836, 77.
—— and iodine, Rev. T. Knox on the relative electro-negative powers of, 1843, 39.
—— in plants, on, 1849, 43, 49.
—— in the waters of the Firth of Forth, the Firth of Clyde, and the German Ocean, Prof. G. Wilson on, 1849, 47.
——, Prof. G. Wilson on the presence of, in blood and milk, 1850, 67.
——, on the processes for the detection of, by Prof. G. Wilson, 1857, 61.
Flustra Barleei, G. Busk on, 1859, 145.
—— carbasea, J. G. Dalyell on the propagation of, 1834, 603.
Flustrella hispida, Prof. Redfern on, 1857, 106.
Fly-wheel, large, erected at the Mersey Iron-works, W. Clay on the, 1854, 147.
Fœtal life, on the chemistry of, by Prof. Schlossberger, 1855, 135.
Fœtus, human, Dr. J. Reid on the anatomical relation of the blood-vessels of the mother to those of the, 1840, 153.
——, human, without brain, heart, lungs, and liver, Dr. Houston on a, 1836, 122.
Fœtuses, acardiac, Dr. Houston on the circulation of the blood in, 1843, 81.
Fog-rings observed in America, Sir D. Brewster on, 1845, 19.
Fogs, electric, 1836, 48.
Foliation of some metamorphic rocks in Scotland, Prof. E. Forbes on the, 1854, 82.
Food, Dr. Daubeny on the nutritive value of different kinds of, 1847, 49.
—— of artisans, on the quality of, in an artificially heated atmosphere, by R. Galloway, 1855, 63.
——, on the percentage of nitrogen as an index to the nutritive value of, by Dr. Voelcker, 1850, 64.
Food-stuffs, vegetable, on the current method for estimating the cellular matter in, by T. Segelcke, 1859, 79.
Foramen centrale, on the visual impressions upon the, by Sir D. Brewster, 1848, 48.
—— centrale, on the unequal sensibility of the, to light of different colours, by Prof. J. C. Maxwell, 1856, 12.
Foraminifera, on the British species of, by Prof. W. C. Williamson, 1854, 113.
Force of vapour, Capt. Shortrede on the, 1846, 16.
Forces, on the polyhedron of, by J. T. Graves, 1856, 1.
Forest trees, on the failure of bright-coloured flowers in, to produce pictorial effect on the landscape, unless accompanied by abundance of green leaves, by Dr. G. Buist, 1859, 130.
—— vegetation of Spain, Capt. Widdrington on the, 1847, 88.

Forest, submarine, of Lessowe, J. Cunningham on the, 1854, 81.
——, submerged, at Wawne in Holderness, on changes observed in wood from the, 1853, 45.
Forests, submarine, and fens of Lincolnshire, Rev. E. Trollope on the, 1858, 113.
——, submerged, of Caithness, J. Cleghorn on the, 1859, 101.
Fornix cerebri in man, mammals, and other vertebrata, Prof. Retzius on the, 1855, 133.
Fortresses and habitations, stone-built, remains of, in the co. of Kerry, 1857, 148.
Forts, vitrified, on Noth and Dunnideer, Aberdeenshire, Sir A. L. Hay on the, 179.
Fossil crustaceans, minute, in palæozoic rocks, Prof. Phillips on, 1841, 64.
—— Diatomaceæ found near Hull, 1853, 63.
—— elephantine animals of India, Dr. Falconer on the, 1845, 62.
—— fern, Cyclopteris hibernica, W. H. Baily on the fructification of the, 1858, 75.
—— fern (Sphenopteris Hookeri), new, from the upper old red sandstone formation at Kiltorkan Hill, co. Kilkenny, W. H. Baily on the, 1859, 98.
—— fern, new, from the coal-measures, 1857, 63.
—— fishes, M. Agassiz on, 1835, 61.
—— fishes from the North Staffordshire coal-fields, W. Molyneux on the, 1860, 88.
—— fishes of Dura Den, Rev. Dr. Anderson on the, 1850, 70.
—— fishes and yellow sandstone of Dura Den, on the, 1858, 74.
—— fish (Holoptychius Andersoni) from the Dura Den sandstones, 1858, 95.
—— fishes, new to the old red sandstone of Caithness, C. W. Peach on, 1859, 120.
—— fishes from the Caithness schist of Pomona, Orkneys, and from Clashbennie, 1836, 95.
—— fishes of Orkney, Dr. Traill on the, 1834, 646.
—— fish remains from the upper old red sandstone formation at Kiltorkan Hill, co. Kilkenny, W. H. Baily on, 1859, 98.
—— fishes of North Brazil, G. Gardner on the, 1840, 118.
—— fishes and tracks from the passage rocks and from the old red sandstone of Herefordshire, Rev. W. S. Symonds on, 1859, 124.
—— fishes of the London clay, Prof. Agassiz on the, 1846, 52.
—— fishes of the Ludlow rocks, 1837, 91.
—— fishes of the old red sandstone of Farnell, Forfarshire, Sir P. de M. G. Egerton on, 1860, 77, 89.
—— fishes of Scotland, Prof. Agassiz on the, 1834, 646.
Fossil fishes of the old red sandstone of the north of Scotland, Prof. M'Coy on the structure of the, 1852, 55.
—— fishes, on the mode of succession of the teeth in Cochliodus, by Prof. M'Coy, 1852, 55.
—— fishes, Rev. D. Williams on the discovery of the remains of, at the base of the mountain limestone near Bristol, 1842, 60.
—— flora of Scotland, Hugh Miller on the, 1855, 83.
—— footprints of a large reptilian in the middle of the ancient coal-measures, 1846, 119.
—— footsteps in the new red sandstone quarry at Lymm, Cheshire, Mr. Hawkshaw on the, 1842, 56.
—— geology of Cornwall, C. W. Peach on the, 1849, 63.
—— insects in the lower beds of the lias of Gloucestershire, Rev. P. B. Brodie on the discovery of, 1842, 58.
—— insects of the secondary formations of Britain, Prof. Strickland on the results of researches into the, 1845, 58.
—— ivory, Dr. G. O. Rees on fluorine in, 1839, 57.
—— mammal (Stereognathus ooliticus) from the Stonesfield slate, Prof. Owen on a, 1856, 73.
—— anoplotherioid mammal (Dichobune ovinum) from the upper eocene of Hordwell, Prof. Owen on a, 1856, 72.
—— mammalia, new, from the eocene freshwater formation at Hordwell, Hants, Prof. Owen on some, 1851, 67.
—— mammalia of South America, Prof. Owen on some, 1846, 65.
—— musk-ox, from the Wiltshire drift, Prof. Owen on additional evidence of the, 1856, 72.
—— of the Severn drift, Rev. W. S. Symonds on a, 1857, 93.
—— plants from Devonshire and Pembrokeshire, Rev. D. Williams on, 1835, 63.
—— plants of the carboniferous period, in the Tarentaise, C. Bunbury on, 1848, 64.
—— plants, Prof. Göppert's tabular view of, 1845, 48.
—— plants, &c. of the Permian system, Sir R. I. Murchison on the, 1843, 52.
—— organic remains of the south-east coast of Cornwall, and of Bodmin and Menheniott, C. W. Peach on the, 1841, 61.
—— remains discovered in Bacon Hole, Gower, C. Spence Bate on, 1848, 62.
—— remains found at Urquhart, near Elgin, Rev. J. Morrison on, 1859, 263.
—— remains in two newly discovered caves in Sicily, Baron Anca on, 1860, 73.
—— remains of the lower Silurians of the south of Scotland, Prof. Harkness on the, 1852, 48.

Fossil remains found in Yorkshire, on the, 1831–32, 57.
—— reptile (Sauropus primævus) found in the old red sandstone, J. Lee on traces of a, 1849, 56, 134.
—— saurians, new species of, 1833, 440.
—— scales, A. Connell on the chemical constitution of, 1835, 41.
—— sepia in the lias of Gloucestershire, Prof. Buckman on some remains of the 1848, 66.
—— shells (marine), of recent species, at considerable elevations near Preston, 1834, 654.
—— sponge, Choanites Königi, W. Cunnington on a peculiarity in the structure of the, 1848, 67.
—— sponges, on a curious spiral body in, 1853, 51.
—— stems allied to Stigmaria, from the upper beds of the old red sandstone, Rev. Prof. Haughton on, 1857, 69.
——, discovery of a new Talpina?, 1852, 55.
—— teeth of sauroid fishes, Sir D. Brewster on the structure of, 1838, 90.
—— trees, J. Smith on some, 1835, 63.
—— trees at St. Helen's, Lancashire, which exhibit Stigmariæ as their roots, E. W. Binney on, 1845, 52.
—— vegetables from the new red sandstone of Worcestershire, J. Yates on the, 1837, 59.
—— vegetables, microscopic, found in peat near Gainsborough, E. W. Binney on, 1839, 71.
—— vegetation, Mr. Witham on, 1831–32, 583.
—— wood and plants low down in the grauwacke of Devon, Rev. D. Williams on the discovery of, 1837, 94.
—— wood, from Faroe, notice of, 1834, 666.
—— woods, W. Nicol on the structure of, 1834, 660.
Fossiliferous deposit near Farnell in Forfarshire, T. Powrie on a, 1860, 89.
—— deposit underlying basalt in the island of Mull, Duke of Argyll on the, 1850, 70.
Fossilization of wood, artificial, 1837, 47.
Fossils, British North American, Dr. Hector on, 1860, 80.
——, Ayrshire, Prof. Wyville Thomson on some, 1853, 61.
—— of the Closeburn Basin, Dumfriesshire, 1840, 98.
—— from Durness, J. W. Salter on, 1857, 83.
—— of the Dingle district, 1857, 89.
—— of Bracklestone Bay, Sussex, 1846, 67.
—— of the caverns at Oreston, near Plymouth, W. Pengelly on the, 1859, 121.
—— of Polperro, in Cornwall, C. W. Peach on the, 1843, 56.
——, discovery of, on Great Hangman Hill, North Devon, 1841, 64.
Fossils from the vicinity of Stamford, 1847, 127.
—— from the Barbary coast, 1857, 67.
—— collected at Sunday River, Cape frontier, by R. Rubidge, 1851, 68.
—— from the Crimea, W. H. Baily on, 1856, 60.
—— from the boulder-clay, 1850, 93.
—— from the Cambrian rocks of the Longmynd, Shropshire, J. W. Salter on, 1855, 95.
——, carboniferous limestone, from the county of Limerick, W. H. Baily on, 1857, 62.
—— in the carboniferous limestone series of Ireland, 1843, 45.
—— of the carboniferous or mountain limestone of Ireland, R. Griffith on the, 1842, 51; 1843, 42.
—— of the coal formation of Nova Scotia, J. W. Dawson on the, 1855, 81.
—— of the coal formation of the west of Scotland, 1840, 89.
—— of the coal-measures of West Lancashire, 1837, 81.
—— of the coal strata of North Staffordshire, R. Garner and W. Molyneux on the, 1859, 103.
—— of the cretaceous formation, &c., in Aberdeenshire, Rev. Dr. Longmuir on the, 1859, 262.
—— in the crystalline rocks of the North Highlands, Sir R. I. Murchison on their discovery by Mr. Peach, 1855, 85.
—— of the culm and plant rocks in the neighbourhood of Exeter, 1840, 103.
——, Devonian, J. C. Bellamy on, 1841, 64.
——, Devonian, of Devon and Cornwall, W. Pengelly on the chronological and geographical distribution of the, 1860, 91.
—— of the freshwater eocene beds of the Hordle Cliffs, 1847, 63, 65.
—— of the limestones and slates of South Devon, R. A. C. Austen on the, 1839, 69.
—— in the lower lias of Dorsetshire, on a remarkable deposit of carbonate of lime about the, by G. Gladstone, 1858, 51.
—— of the lias or inferior oolite near Caen, Normandy, 1840, 110.
—— of the Lingula flags of North Wales, J. W. Salter on the, 1852, 56.
—— of the lower oolites of Oxfordshire, J. F. Whiteaves on the, 1860, 104.
—— of the oolite in the neighbourhood of Grantham, 1850, 75.
——, new, from the ancient sedimentary rocks of Ireland and Scotland, Prof. Harkness on, 1856, 65.
——, new, from the old red sandstone of Caithness, J. Miller on, 1859, 115.
—— from the lower old red sandstone of Scotland, Hugh Miller on the, 1850, 91.
—— of the old red sandstone, or Devonian and Silurian districts of Ireland, 1843, 46.

Fossils of the Pentamerus limestone and May Hill sandstone of Norbury and Linley, 1853, 58.
——, Permian, of Cultra, Belfast Lough, Prof. W. King on the, 1852, 53.
—— of the rocks of Spain, 1850, 108.
—— of the rocks of the frontier chain of Scotland, 1850, 103.
—— from the sands and Cephalopoda-bed of Beacon Hill, Nailsworth, Frocester Hill, and Wotton-under-Edge, T. Wright on the, 1856, 81.
—— of the Dura Den sandstone, Rev. Dr. Anderson on the, 1858, 74; 1859, 97.
——, J. W. Salter on the structure and relations of Cornulites and other allied Silurian, 1845, 57.
—— of the Silurian rocks of Bohemia, 1850, 97, 99.
—— of the lower and upper Silurian rocks of Canada, 1851, 63.
——, on a few genera of Irish Silurian, by J. W. Salter, 1852, 59.
——, Silurian, in Ireland, 1844, 47.
——, Silurian, in the slates of Downshire, J. Bryce on the discovery of, 1859, 260.
—— in the freshwater tertiary of the island of Cos, phenomena presented by, 1845, 59.
—— of the tertiary and alluvial basin of the Middle Rhine, Sir R. I. Murchison on the, 1843, 55.
——, tertiary, of India, W. H. Baily on the, 1859, 97.
—— of the triassic drift in the neighbourhood of Frome, C. Moore on the, 1860, 87.
—— of the yellow sandstone of the south of Ireland, Prof. E. Forbes on the, 1852, 43.
—— of the Yorkshire flagstones, W. Baines on the, 1858, 78.
——, distortion of, by cleavage, Rev. Prof. Haughton on a model illustrative of the, 1857, 69.
——, new vertebrate, E. Charlesworth on a, 1854, 80.
——, on the genus Woodocrinus, by Prof. Koninck and E. Wood, 1857, 76.
——, on copying, by a galvanic deposit, 1841, 67.
——, on the Daguerreotype as applied to the drawing of, 1840, 121.
——, vermiform, found in the mountain limestone districts of the north of England, A. Hancock on, 1858, 80.
Foucault's pendulum experiment, Rev. Prof. Walker on, 1851, 19.
Foundling Hospital, Dublin, Dr. Maunsell on the statistics of the, 1835, 113.
Fourier's Théorie de la Chaleur, R. Murphy on, 1831–32, 547.
Fowls, on the chemical and physiological effects of feeding, 1848, 89.
Fractions, decimal, A. Peacock on, 1842, 10.
Fractures, T. M. Greenhow on a sling bed for the treatment of, 1838, 130.
Fraunhofer's wave-lengths, 1859, 20.
Freezing of water in red-hot vessels, M. Boutigny on the, 1845, 27.
Freshwater deposit at Mundesley, J. Prestwich on the, 1860, 90.
Fresnel's formulæ for reflected and refracted light, Rev. Prof. Powell on, 1856, 15.
—— theory of the reflexion of light from the surfaces of bodies, remarks on, 1831–32, 74.
—— wave-surface, on an application of quaternions to the geometry of, by Sir W. R. Hamilton, 1859, 248.
Friction in air, Dr. J. P. Joule on the heat developed by, 1859, 12.
—— of water, R. Rawson on the, 1849, 3.
Froth, Dr. J. H. Gladstone on, 1857, 48.
Fruit-bearing tree, on the remarkable result of an experiment upon a, by N. Niven, 1857, 100.
Fruits, cultivated and wild, of the Deccan, Col. Sykes on the, 1836, 106.
Fuchsia, Rev. W. Hincks on abnormal forms in the flowers of, 1843, 78.
Fucus vesiculosus and F. serratus, analysis of, by E. G. Schweitzer, 1845, 37, 38.
——, on a supposed fossil, found at Aust Cliff, Gloucestershire, 1856, 83.
Fuel, plan for cementing together small coal and coal-dust for, 1838, 85.
——, T. Oram on the economy of, 1839, 69.
Fulgora candelaria, J. O. Westwood on a lepidopterous parasite on the, 1860, 124.
Functions, calculus of principal, Sir W. R. Hamilton on the, 1834, 513.
——, conjugate, or algebraic couples, as tending to illustrate the doctrine of imaginary quantities, Sir W. R. Hamilton on, 1834, 519.
——, exponential, J. T. Graves on the theory of, 1834, 523.
——, Rev. Prof. Jarrett on the summation of certain circular, 1847, 5.
Fungi, chemical examination of, 1846, 43.
—— destructive in agriculture, J. Prideaux on the extent, causes, and remedies of, 1846, 44.
——, on the probability of the conversion of asci into spores in, by Rev. M. J. Berkeley and C. E. Broome, 1851, 70.
Funicularia quadrangularis, new British zoophyte, 1844, 64; 1845, 66.
Furnace-grate, new, J. G. Bodmer on a, 1844, 98.
Furnaces, blast, on the incrustations of, by Prof. F. C. Calvert, 1856, 50.
——, blast, at Ystalyfera, on the advantageous use made of the gaseous escape from the, 1850, 172.
——, on the economical working of, by W. Day, 1854, 149.
——, on the prevention of smoke in, by Mr. Williams, 1840, 199.

Furnaces, W. Fairbairn on the fan-blast as applied to, 1840, 199.
Fusus antiquus, on a curious monstrosity of form in the, by G. C. Hyndman, 1857, 104.
—— Boothi and F. umbilicatus, new shells, dredged in Rothsay Bay, 1837, 100.

Gadus morrhua, on the structure of the otoliths of the, by Prof. Redfern, 1859, 174.
Galactin, Prof. T. Thomson on, 1838, 46.
Galactodendron utile of South America, Prof. T. Thomson on the, 1838, 46.
Galago, on a new species (G. murinus), from Old Calabar, 1859, 153.
Galathea, on a new species (G. Andrewsii), by Prof. Kinahan, 1857, 104.
Gales, revolving, Lieut.-Col. W. Reid on mooring ships in, 1851, 36.
Galium montanum, Thuill., and G. commutatum, Jord., discovered in Yorkshire, 1855, 100.
—— Vaillantii, British, 1844, 73.
Gallas, Dr. Beke on the origin of the people called, 1847, 113.
Gallic acid, on the conversion of tannin into, by J. Horsley, 1856, 52.
—— and tannic acids, Prof. F. C. Calvert on their action on iron and alumina mordants, 1854, 65.
Galvanic arrangements, table of the relative and absolute powers of, by W. Petrie, 1850, 185.
Galvanic battery, M. Pulvermacher's, 1851, 52.
—— battery, Prof. W. Thomson on the sources of heat generated by the, 1852, 16.
—— battery, on a form of, by W. H. Walenn, 1849, 45.
—— battery, J. P. Gassiot on the decomposition of water under pressure by the, 1853, 39.
—— battery with sulphate of lead, M. E. Becquerel on a, 1860, 59.
—— batteries, invented by M. Kukla of Vienna, 1853, 44.
—— connexion, Mr. Harper on, 1847, 27.
—— currents, J. Hartnup on controlling the movements of ordinary clocks by, 1857, 13.
—— deposit, T. B. Jordan on copying fossils by a, 1841, 67.
Galvanism, Dr. Leeson on its influence on endosmose and exosmose, 1845, 83.
Galvanization of metals, Prof. Schönbein on, 1839, 34.
Galvanometer, description of a, by J. P. Joule, 1843, 14.
——, new, W. S. Ward on a, 1847, 60; 1848, 62.
—— of four spirals, Rev. Prof. Cumming's, 1833, 418.
Galvanometry, W. Petrie on a fixed scale for electromotive force in, 1850, 185.
Galvanoplastics, or electrotype, Prof. Jacobi on his discovery of, 1840, 89.
Gamboge, Prof. Johnston on the resin and compounds of, 1838, 60.
Gambogic acid and the gambogiates, Dr. Scoffern on their use in artistic painting, 1851, 51.
Gangrene of the lungs, Dr. Popham on its treatment by chloride of lime, 1843, 82.
Ganoids, ancient, Hugh Miller on certain extraordinary peculiarities of structure in the, 1850, 91.
——, notice of one representing a new genus, by W. Molyneux, 1860, 89.
Gardens, suburban, N. B. Ward on, 1858, 117.
Garnet, Connemara, analysis of, by Prof. Rowney, 1860, 71.
Gas-battery, on a new form of the, by W. Symons, 1855, 15.
Gas-burners, shadowless, H. Dircks on the construction of Luntley's, 1843, 98.
Gas, chlorine, exposed to daylight, possesses qualities which are not in that which is kept in the dark, 1843, 9.
——, coal-, R. Mallet on phenomena of flame from, 1835, 49.
——, illuminating, from peat, R. L. Johnson on, 1857, 51.
——, illuminating, new form of instantaneous generator of, by means of superheated aqueous vapour and any hydrocarburet, MM. Isoard and Son on a, 1859, 69.
——, new, Prof. E. Davy on a, 1836, 62.
——, olefiant, some experiments on, 1838, 40.
——, spontaneous, at Charlemont, Staffordshire, 1849, 38.
Gas-furnace for organic analysis, Dr. Percy on a, 1846, 49.
Gas-meter, dry, Cliff's, Mr. Samuda on, 1838, 158.
Gas-meter, dry, Mr. Clegg on a, 1842, 111.
Gas-meters, wet, on a method of maintaining a true liquid level, applicable to, by A. Allan, 1859, 228.
Gas-regulator, J. Milne on a, 1840, 213.
Gas-stove, W. S. Ward on a, 1850, 191.
Gas voltaic battery, W. R. Grove on the, 1845, 30.
Gases, action of, on the prismatic spectrum, 1845, 28.
——, Bernoulli's theory of, as applied to their internal friction, their diffusion, and their conductivity for heat, Prof. J. C. Maxwell on the results of, 1860, 15.
——, on the dynamical theory of, by Prof. J. C. Maxwell, 1859, 9.
——, C. M. von Bose on the theory of volumes which separates them from other bodies, 1860, 71.
——, Dr. Apjohn on the specific heats of, 1836, 33.
——, Dr. Miller on their action on the prismatic spectrum, 1845, 28.
——, dry, Dr. G. Wilson on the influence of sunlight over the action of, on organic colours, 1850, 65.

Gases given off by hot springs, on the, 1831–32, 24.
—— in atmospheric air, W. West on detecting, 1836, 77.
——, J. J. Waterston on a general theory of, 1851, 6.
——, Prof. Graham on a new property of, 1845, 28.
—— saturated with moisture, formula by which a proper correction for vapour may be applied to the specific gravities obtained by experiments on, 1831–32, 575.
Gaseous bodies, Rev. T. Exley on the laws of chemical combinations and the volumes of, 1848, 50.
—— compound of carbon and hydrogen, new, 1837, 50.
—— escape from the blast furnaces at Ystalyfera, advantageous use made of the, 1850, 172.
—— interference, Dr. C. Henry on, 1836, 54.
Gasteropod, terrestrial, Dr. Allman on a new genus (Geomalacus) of, 1843, 77.
Gasteropoda, on reproduction in the, and on some curious effects of endosmosis, by R. Garner, 1859, 162.
Gastric and intestinal glands, Prof. A. Thomson on the structure of the, 1840, 149.
Gastro-intestinal mucous membrane, Prof. A. Thomson on the structure of the, 1840, 149.
Gauge, eccentric, R. Roberts on the, 1849, 128.
——, deep-sea pressure-, Rev. Dr. Booth on a, 1860, 202.
——, deep-sea pressure-, H. Johnson on a, 1859, 236.
Gault of the neighbourhood of Cambridge, Rev. Prof. Sedgwick on the, 1845, 41.
Geese, wild, British, A. Strickland on the, 1858, 131.
Geine, an extractive matter from turf, 1835, 47.
Gemmation in the lower tribes of plants, G. H. K. Thwaites on, 1848, 87.
Gems, artificial, M. Ebelmen on, 1849, 36.
Genera and subgenera, Rev. L. Jenyns on, 1833, 440.
Generation, equivocal, experiments on, by Dr. Daubeny, 1860, 115.
Genetic cycle in organic nature, Dr. Ogilvie on the, 1859, 172.
Geodetical operations of India, Col. Everest on the, 1844, 3.
Geographical modelling, W. Bald on, 1840, 126.
Geological distribution of marine life, Prof. E. Forbes on a map of the, 1852, 73.
—— evidence and inferences, R. A. C. Austen on, 1838, 93.
—— colours, for maps, on a scale of, 1831–32, 592.
—— maps, J. W. Salter on a system of colour for, 1847, 69.
Geological (Ordnance) map of England, coloured, notice of the, 1844, 46.
—— map of Ireland, R. J. Griffith on the, 1835, 56.
—— map of the environs of Dublin, notice of a, 1835, 58.
—— map of Europe, notice of Mr. Greenough's numerous and valuable materials for a, 1831–32, 583.
—— map of Europe, new, notice of a, 1855, 22.
—— models, T. Sopwith on the construction of, 1838, 94.
—— Museum, Ordnance, Prof. Phillips's notice of the, 1843, 61.
—— and mineralogical museum of the Imperial Mining Department of Vienna, Prof. Haidinger on the, 1842, 39.
—— phenomena, explanation of certain, by the agency of glaciers, 1844, 57.
—— section, from the island of Little Rye across the peninsula between the estuaries of the Dee and Mersey to the east of Liverpool, E. Hull on a, 1854, 86.
—— section of Europe, Conybeare's, 1831–32, 583.
—— structure of the counties of Down and Antrim, J. Bryce on the, 1852, 42.
—— structure of the south of Ireland, R. Griffith on the, 1838, 81.
—— survey, F. Whishaw on exhibiting at one view the results of a, 1845, 56.
—— Survey of India, general sketch of the districts visited by the, 1857, 85.
—— theories and the theory of the figure of the earth, Prof. Hennessy on the connexion between, 1852, 21.
Geology of the vicinity of Aberdeen and the north-east of Scotland, Prof. Nicol on the, 1859, 116.
—— of the Western States of North America, 1842, 44.
—— of the Arctic regions, on some additions to the, by J. W. Salter, 1855, 211.
—— of Castle Hill, Ardrossan, 1840, 95.
—— of the island of Arran, Prof. A. C. Ramsay on the, 1840, 92.
—— of North Asia, A. Erman on the, 1842, 46.
—— of Barbadoes, Sir R. H. Schomburgk on the, 1847, 70.
—— of Berwickshire, D. Milne on the, 1834, 624.
—— and fossil fishes of North Brasil, 1840, 118.
—— of Canada, 1840, 114.
—— of the southern extremity of Cantyre, Argyleshire, Prof. Nicol on the, 1850, 100.
—— of a portion of Cardiganshire, Prof. A. C. Ramsay on the, 1847, 66.
—— of Carnarvonshire, Rev. A. Sedgwick on the, 1831–32, 591.
—— of the Channel Islands, R. A. C. Austen on the, 1849, 49.
——, fossil, of Cornwall, C. W. Peach on the, 1849, 63.

Geology of the Crimea, W. H. Baily on the, 1856, 60.
—— of a part of the Himalaya and Thibet, Capt. Strachey on the, 1851, 69.
—— of a portion of the Himalaya mountains, Major Vicary on the, 1852, 62.
—— of India, G. B. Greenough on the, 1854, 83.
—— of India, general sketch of the districts visited by the Geological Survey of India, by T. Oldham, 1857, 85.
—— of Ireland, R. Griffith on the leading features of the, 1837, 88; 1852, 47.
—— of the Dingle promontory, Ireland, Prof. Harkness on the, 1855, 83.
—— of the Galty mountains, &c., in the south of Ireland, A. B. Wynne on the, 1857, 93.
—— of the Lake district, in reference especially to the metamorphic and igneous rocks, J. G. Marshall on the, 1858, 84.
—— of the coal district of South Lancashire, J. Heywood on the, 1837, 77.
—— of Lundy Island, Rev. D. Williams on the, 1848, 79.
—— and physical character of Norfolk Island, Capt. Maconochie on the, 1844, 57.
—— of the Orkneys, Dr. Hibbert on the, 1834, 644.
—— of the island of Pantellaria, Duke of Buckingham on the, 1831–32, 592.
—— of Pennsylvania, Prof. H. D. Rogers on the, 1848, 74.
—— of the Pentland Hills, C. Maclaren on the, 1834, 649.
—— of Russia, Sir R. I. Murchison on the, 1842, 45.
—— of the north-eastern extremity of Russia in Europe, by Count Keyserling, Sir R. I. Murchison on the, 1847, 65.
—— of the Scilly Isles, Rev. F. F. Statham on the, 1858, 108.
—— of the great mountain-range of the south of Scotland, W. Macgillivray on the, 1834, 650.
—— of the peninsula of Mount Sinai and the adjacent countries, J. Hogg on the, 1849, 52.
—— of Spain, Dr. Traill on the, 1835, 61; 1837, 70.
—— of Spain, Sir R. I. Murchison on the, in explanation of an outline general map of the Peninsula by E. de Verneuil, 1850, 108.
—— of the neighbourhood of Stamford and Peterborough, Capt. Ibbetson and Prof. Morris on the, 1847, 127.
—— of the neighbourhood of Tralee, F. J. Foot on the, 1857, 65.
—— of the county of Wicklow, Prof. Oldham on the, 1848, 71.
—— of Hotham, South Cave, Yorkshire, Rev. T. W. Norwood on the, 1858, 96.
——, chemical, T. S. Hunt on some points in, 1860, 83.
Geology, physical, of the Silurian district between Builth and Pen-y-bont, Prof. A. C. Ramsay on some points connected with the, 1848, 73.
——, physical, W. Hopkins on certain points in, 1836, 78.
——, Rev. Dr. Whewell on the application of physical science to, 1835, 65.
——, on the use of observations of terrestrial temperature for the investigation of absolute dates in, by Prof. W. Thomson, 1855, 18.
Geomalacus, a new genus of terrestrial gasteropod, Dr. Allman on, 1843, 77.
Geometric series, C. Blackburn on some new properties of, 1837, 2.
—— method, general, C. Graves on a, 1838, 1.
Geometrical analysis of the ancients, on the proofs of its having been cultivated in England, 1831–32, 58.
Geometry, analytical, on a more general theory of, including the Cartesian as a particular case, by A. J. Ellis, 1855, 5.
——, analytical, on the notion of distance in, by A. Cayley, 1858, 3.
——, algebraic, Prof. Stevelly on the meaning of the doubtful algebraic sign in certain formulæ of, 1836, 5.
——, H. Wedgwood on the premises of, 1845, 2.
Georama (representation of the globe), M. Guérin on the, 1846, 73.
Gerhardt's proposal for doubling the atomic number of oxygen, some practical objections to, by Prof. W. A. Miller, 1860, 70.
German Universities, statistics of, 1845, 86.
Germanic, Lithuanic, and Slavonic populations, Dr. Latham on the original distribution of the, 1850, 141.
Germans, ancient and modern, on the physical character of the, by Dr. Beddoe, 1857, 118.
Germination of seeds, on the action of light on the, by Dr. Daubeny, 1855, 56.
Geysers, Haukedalr, of Iceland, on the condition of the, by R. Allan, 1855, 75.
—— of Iceland and California, Dr. S. Macadam on the cause of the phenomena exhibited by the, 1854, 73.
Ghadamsi dialect of Berber, Dr. Latham on the, 1847, 124.
Giffard's injector for feeding boilers, W. Froude on, 1860, 211.
Gipsies, on the race and language of the, by Rev. T. R. Norwood, 1858, 195.
Giraffe, Mr. Ball on the peculiar structure of the hoof of the, 1844, 63.
——, on a curious pouched condition of the glandulæ Peyerianæ in the, by Dr. T. S. Cobbold, 1855, 122.
Girders, lattice, J. Barton on the calculation of strains in, 1852, 123.
—— or beams, T. M. Gladstone on malleable iron for, 1852, 126.

Glacial diluvium in Switzerland and Piedmont, Dr. C. Martins and B. Gastaldi on, 1850, 90.
—— phenomena of the neighbourhood of Edinburgh, R. Chambers on the, 1850, 78.
—— phenomena in Scotland and the north of England, R. Chambers on, 1854, 79.
—— phenomena of the Lake district of England, J. Bryce on the, 1855, 80.
Glacier, the Sulden, Sir T. D. Acland on a remarkable movement of, 1847, 60.
Glacier-friction on the north-west side of Bantry Bay, G. B. Airy on numerous traces of, 1843, 62.
Glacier-ice, attempt to establish the plastic nature of, by Prof. J. D. Forbes, 1844, 24.
Glaciers, J. Stark on the structure and mode of formation of, 1842, 58.
——, Canon Moseley on the cause of the descent of, 1860, 48.
——, R. Mallet on the mechanism of the movement of, 1837, 64.
——, W. Hopkins on the cause of the motion of, 1843, 62.
——, General Sabine on their agency in transporting rocks, 1843, 62.
——, on the explanation of certain geological phenomena by the agency of, by E. Batten, 1844, 57.
——, ancient, in Glenmessan, C. Maclaren on traces of, 1850, 90.
——, ancient, of North Wales, Prof. A. C. Ramsay on the thickness of the ice of the, 1854, 94.
——, on the former existence of, in the valleys around Snowdon, 1848, 78.
—— and boulders in Switzerland, Prof. Agassiz on, 1840, 113.
—— of the Himalayas of Kemaon, A. and R. Schlagintweit on the, 1855, 152.
——, palæozoic, Prof. A. C. Ramsay on the former probable existence of, 1854, 93.
——, on the plasticity of ice, by Prof. J. Thomson, 1857, 39.
——, R. Mallet on the stony débris called "moraine," found on, 1837, 66.
——, W. Milward on the origin of "dirt-bands" on, 1848, 71.
Glands, conglobate, Dr. Jeffreys on the uses of the, 1840, 156.
——, gastric and intestinal, Prof. A. Thomson on the, 1840, 149.
——, orbital, in birds, P. J. Selby on, 1834, 609.
Glasgow Bridewell, Dr. Cleland on the, 1835, 123.
Glasgow observatory, Prof. Nichol's account of the, 1840, 1.
Glass, coloured, M. Splittgerber on the manufacture of a, 1845, 29.
——, coloured, employed in glazing the palm-house in the Royal Botanic Garden at Kew, R. Hunt on the, 1847, 51.
——, decomposed, found at Nineveh and other places, Sir D. Brewster on the, 1859, 11; 1860, 9.
Glass, decomposed, R. Thomas on thin films of, 1860, 19.
——, Sir D. Brewster on the decomposition of, 1840, 5.
——, decomposed, Sir D. Brewster on the rings of polarized light produced in, 1840, 6.
—— etched in relief by hydrofluoric acid, 1859, 88.
——, G. Bontemps on some modifications in the colouring of, by metallic oxides, 1849, 35.
——, its colouring matter diminishes its power of transmitting heat, 1833, 382.
——, L. Schwabe on his method of spinning, 1842, 114.
——, on the peculiar action of mud and water on, by Dr. C. W. Bingley, 1858, 45.
—— of antimony, R. Potter on its power to reflect light, 1833, 377.
—— cells for mounting microscopic objects in fluid, C. Brooke on a method of making, 1854, 47.
—— furnaces, T. M. Greenhow on an air-duct to be used in, for the prevention of smoke, 1844, 35.
Glass-making (plate) in England, H. Howard on, 1846, 101.
—— manufacture of Glasgow, Dr. Strang on the, 1856, 153.
—— tubes, Dr. T. Andrews on a simple instrument for graduating, 1857, 37.
—— tubes for eudiometrical purposes, improved method of graduating, by C. T. Coathupe, 1839, 62.
Glaucoma scintillans, an infusorial animalcule, J. Samuelson on the, 1856, 98.
Glaux maritima, found on the banks of the Droitwich canal, 1847, 61.
Globes, spherical, on the printing of, by I. J. Silbermann, 1858, 154.
Glosso-pharyngeal nerve, Dr. M. Hall and S. D. Broughton on the sensibility of the, 1836, 125.
Gluten, soluble, from wheat, W. C. Jones on a peculiar form of, 1836, 74.
Glycerine, on a process for obtaining and purifying, and on some of its applications, by G. F. Wilson, 1855, 75.
Glyptodon reticulatus, G. ornatus, G. tuberculatus, G. clavicaudatus, new species of the gigantic extinct Armadilloes of South America, 1846, 67.
Gneiss and mica-schist, J. B. Jukes on the alteration of clay-slate and gritstone into, by the granite of Wicklow, 1856, 68.
—— rocks in the north of Scotland, Prof. J. Nicol on the age and relations of the, 1858, 96.
——, red sandstone, and quartzite, on the relations of the, in the north-west Highlands, by Prof. Nicol, 1859, 119.
Goadby's solution for preserving soft animals, 1845, 65.

Goddard's polariscope, 1839, 8.
Gold-bearing districts of the world, E. Hopkins on the, 1855, 83.
Gold discoveries, on the laws according to which a depreciation of the precious metals consequent upon an increase of supply takes place, considered in connexion with, by Prof. Cairnes, 1858, 174.
—— discoveries, on some of their principal effects, as an instrument of purchase, on the production and distribution of real wealth, 1857, 156.
—— in California, Prof. W. N. Hancock on the discovery of, 1849, 94.
—— mines of the Isthmus of Darien, Dr. Cullen on the, 1850, 79.
—— nuggets from Australia, Prof. Tennant on some, 1859, 85.
—— of Australia and California, J. Crawfurd on the effects of the, 1857, 160.
——, on the effects of the influx which followed the discovery of America, by J. Crawfurd, 1859, 205.
——, on the social and economical influence of the new discoveries of, by H. Fawcett, 1859, 205.
——, the price of silver does not afford an accurate measure of the value of, by Prof. Walsh, 1855, 198.
——, should our standard of value be maintained if gold becomes depreciated in consequence of its discovery in Australia and California?, by Prof. Hancock, 1852, 116.
——, ammonio-iodide of, Rev. J. B. Reade on, 1857, 56.
——, iodides of, Prof. Johnston's analysis of, 1835, 45.
——, two new salts of, Rev. J. B. Reade on, 1847, 57.
——, terchloride and termuriate of, Dr. G. Wilson on the decomposition of, by hydrobromic acid, 1839, 42.
—— ore, Sir R. I. Murchison on the distribution of, in the crust and on the surface of the earth, 1849, 60.
—— ores, discovery of, in Merionethshire, A. Dean on the, 1844, 56.
——, W. Newmarch on new supplies of, 1853, 110.
Goliathus, J. A. Turner on a new species of, 1838, 113.
Goniatites spirorbis, 1840, 103.
—— reticulatus, 1840, 103.
—— striolatus, 1840, 103.
—— calyx, 1840, 103.
Goniometer, hand-, for the angular measurement of the picture in painting, H. R. Twining on a, 1859, 64.
——, Wollaston's, Prof. W. H. Miller on an alteration in, 1838, 153.
——, new, Dr. Leeson's, 1846, 46.
Gordon's plan of ventilating coal-mines, W. Nicholson on, 1849, 125.
Gossan of the Cornish miners, 1836, 82.
Gossypium hirsutum, G. barbadense, G. herbaceum, G. religiosum (cotton plants), Major-General Briggs on the cultivation of, 1839, 90.
Gotha Life Society, on the rate of mortality in the, 1850, 151.
Gothi and Getæ, Dr. Latham on the terms, 1849, 85.
Gouty inflammation, Dr. A. B. Garrod on the specific, chemical and microscopical phenomena of, 1859, 165.
Grallatores, J. Hogg on the classification of the, 1846, 78.
Granary, moveable, for preserving corn, 1844, 99.
Granite, Rev. Dr. Buckland on, 1841, 64.
——, Rev. D. Williams on an original broad sheet of, between Falmouth and Truro, 1849, 68.
——, on the connexion of the, with the stratified rocks in Aberdeenshire, by T. F. Jamieson, 1859, 114.
——, Lieut. Stotherd on a patch of, in the co. of Cavan, 1835, 58.
—— of Wicklow, J. B. Jukes on the alteration of clay-slate and gritstone into mica-schist and gneiss by the, 1856, 68.
——, on certain furrows and smoothings on the surface of, caused by drift sand, at the Cape of Good Hope, by Dr. W. Stanger, 1852, 61.
——, graphic, A. C. G. Jobert on, 1846, 69.
—— in Arran, 1855, 80.
—— boulder in the white chalk, R. Godwin-Austen on the occurrence of a, 1857, 62.
—— and mica-slates, Killiney Hill, Dublin, G. V. Du Noyer on the junction of the, 1857, 84.
—— formations of Newabbey, in Galloway, Rev. J. M. Fisher on the, 1840, 95.
—— quarries of Dartmoor, W. Johnson on the, 1841, 105.
—— and other volcanic rocks of Lundy Island, Rev. D. Williams on the, 1843, 57.
—— rocks, W. Hopkins on the distribution of, from Ben Cruachan, 1851, 59.
Granitic sandstone of North Staffordshire, R. Garner on an economical use of the, 1839, 77.
Grape disease, Dr. A. P. Price on pentasulphate of calcium as a means of preventing and destroying the, 1853, 46.
Graphic telescope, C. Varley on a, 1853, 10.
Graphite, A. Rose on the discovery of, in the island of Mull, 1850, 102.
——, Prof. Harkness on the occurrence of, at Almorness Head, Kirkcudbrightshire, 1852, 50.
——, Dr. Schafhaeutl on a new method of obtaining, 1839, 49.
——, Dr. Schafhaeutl on, 1840, 65.
——, natural and artificial, Prof. Rogers on a new process for analysing, 1848, 59.
Graptolites, A. Gages on the transformation of iron pyrites connected with, 1860, 79.

Graptolites, discovery of, in the Lydit and Phthanit, in the district of Wilsdruff, Saxony, Dr. Geinitz on the, 1860, 79.
Grass-cloth of India, Dr. H. Cleghorn on the, 1850, 310.
Grasses, Dr. Latham on the increase of the ergot upon, 1845, 75.
——, J. Hardy on an Acarus and a Vibrio that attack, 1850, 124.
Grattan's instrument for whirling cards with coloured sectors on them, to show the effect of combining colours, 1850, 21.
Grauwacke of Devon, Rev. D. Williams on the, 1837, 94.
—— rocks of Berwickshire, D. Milne on the, 1834, 625.
Gravel deposits in England, H. E. Strickland on the nature and origin of, 1837, 61.
—— near Birmingham, H. E. Strickland's queries respecting the, 1839, 71.
—— near Worcester, J. Allies on marine shells found in, 1839, 70.
Gravels of Ireland, T. Oldham on the occurrence of marine shells in the, 1844, 57.
Gravitation, light, heat, electricity and magnetism, on the identity of the existences or forces of, 1848, 53.
'Great Eastern' steamship, magnetic experiments made on board the, by W. Rundell, 1857, 22; J. S. Russell on the mechanical structure of the, 195.
Grecian music, Dr. S. Rootsey on, 1836, 37.
Greek alphabet, Rev. Dr. E. Hincks on the state of the, at different periods, 1857, 142.
—— mouldings and ornaments, Penrose and Bennett's instrument for drawing any form of, 1852, 130.
Greensand, Prof. Henslow on nodules from the, 1845, 51.
—— of the north of Ireland, Prof. J. F. Hodges on the phosphatic nodules of the, 1852, 36.
——, upper and lower, and sandstone of the neighbourhood of Cambridge, Rev. Prof. Sedgwick on the, 1845, 41.
——, upper, formations near Cambridge, Prof. Owen on remains of new and gigantic species of Pterodactyle from the, 1858, 98.
Grenier mobile, or moveable granary for preserving corn, O. Byrne on the, 1844, 99.
Gresham buoy for recording the loss of missing ships at sea, J. Oldham on the, 1858, 219.
Gritstone and clay-slate, on their alteration into mica-schist and gneiss by the granite of Wicklow, by J. B. Jukes, 1856, 68.
Grove's battery, description of an arrangement of, by G. J. Stoney, 1857, 20.
Guanches, the extinct inhabitants of the Canary Islands, Dr. Hodgkin on the stature of the, 1844, 81.
Guano, R. Warington on, 1844, 32.
——, Malacca, Dr. Cantor on, 1845, 39.
—— in the Faroe islands, on the discovery of, 1845, 64.
Gull, Bonsparte's, 1852, 77.
Gum-dragon tree, Dr. Mackay on the treatment and flowering of a plant of, 1850, 114.
Gun-barrels, W. Greener on the manufacture of the finer irons and steels for, 1849, 115.
Gunpowder, on the application of the voltaic battery to the ignition of, by Capt. Ward, 1854, 18.
Guns and cannon, S. Smith on the bursting of, 1858, 221.
Guns, large, Capt. Blakely on improvements in, 1857, 179.
Gutta percha, E. Solly on, 1845, 32.
—— percha, Dr. Lankester on the plant which yields, 1847, 86.
—— percha, artificial, Chevalier de Claussen on, 1855, 103.
—— percha and india rubber as insulators for subaqueous telegraphic wires, S. W. Silver on, 1860, 212.
—— percha as an insulator at various temperatures, F. Jenkin on, 1859, 248.
—— percha, G. Busk on its employment for modelling, 1847, 81.
—— percha, G. Busk on its use for making moulds for casts of objects in natural history, 1847, 92.
—— percha, on its application to the arts and manufactures, by F. Whishaw, 1848, 122.
Guyot's (M.) experiment on the earth's rotation, Rev. Prof. Powell on, 1851, 23.
Gymnolepas Cuvieri, 1846, 86.
Gymnotus electricus, employed as a medical shock-machine by the natives of Surinam, 1859, 158.
Gypsum, on a crystalline deposit of, in the reservoir of the Highgate waterworks, by Dr. Gladstone, 1855, 63.
——, unequal expansion of, when heated, 1837, 43.
Gyrodus, Prof. Owen on the teeth of the genus, 1838, 143.
Gyroscope, sur le mouvement de la terre au moyen du, par L. Foucault, 1854, 56.

Habitat of plants as influenced by the nature of strata, Rev. W. S. Symonds on the, 1860, 102.
Hæmadynameter, J. Blake on a, 1838, 129.
Hæmatite, extraordinary bed of, 1845, 49.
Hæmatoxylin, the colouring principle of logwood, Prof. Erdmann on, 1842, 33.
Hæmorrhage from arteries, Dr. Macartney on means to suppress, 1839, 97.
—— from large arteries, Dr. Houston on the means adopted by nature in the suppression of, 1843, 80.
Hæmorrhagic disease, on the pressure of the atmosphere and its power in modifying

and determining, by J. Milligan, 1858, 138.
Haidinger's brushes, Prof. Stokes on, 1850, 20.
Hail, formation of, as illustrated by local storms, W. R. Bowditch on the, 1858, 35.
——, Prof. Stevelly on the origin of, 1834, 566.
Hail-storm, remarkable, R. Garner on a, 1856, 39.
——, Dr. Buist on the question what is a, 1855, 38.
——, Indian, Col. Sykes on an, 1850, 43.
Hail-storms in India, remarkable, Dr. Buist on, 1851, 31; 1855, 31.
Hair, Dr. O'Connor on the sudden falling off of the, from the head, eyebrows, and eyelashes, 1843, 84.
Halarachne halichœri, Prof. Allman on the structure of the larva of, 1847, 74.
Halcyon smyrnensis, Prof. H. E. Strickland on, 1842, 70.
Halecium labrosum and H. nanum, new species of Sertularian zoophytes, by J. Alder, 1858, 126.
Halichœrus griseus of the coast of Ireland, 1836, 98.
Halichondria suberea, Prof. H. E. Strickland on the mode of growth of, 1853, 72.
Halicore australis, J. S. Brazier on the oil of the, 1859, 257.
Halogens, on the compounds of the, with phosphorus, by Dr. Gladstone, 1849, 38.
Haloid salts in solution, Dr. G. Wilson's experimental demonstration of the existence of, 1839, 41.
Hammer, steam-, new double-acting, W. Naylor on a, 1858, 218.
Hancornia speciosa (artificial gutta percha and india-rubber), Chevalier de Claussen on the, 1855, 103.
Hand, human, an index of mental development, by R. Beamish, 1857, 118.
Hands of a Guarani man, on an episcaphoid bone in the, by Prof. Retzius, 1855, 134.
Hansteen's magnetic intensity instrument, effect of three iron cylinders upon, when placed in a given position, 1851, 9.
Harbours, tidal, on the importance of periodical engineering surveys of, by J. Boult, 1855, 147.
——, design for safety, by Capt. J. Saunders, 1852, 129.
Hare, alpine, of Scotland, and the hare of Ireland identical, 1843, 68.
Harmotome, Dr. Tamnau on newly discovered three-twin crystals of, 1843, 38.
Harrington's electriser, notice of, 1835, 106.
Hartwell variable star atlas, 1860, 36.
Hatchets, stone, of the Esquimaux, Sir E. Belcher on the, 1860, 154.
Heat, central, and density of the globe, Dr. Stevenson Macadam on the, 1850, 22.
——, on the distribution of, in the interior of the earth, by Dr. F. A. Siljeström, 1858, 23.
——, distribution of, over the surface of the British Isles, Prof. Hennessy on the, 1857, 30.
Heat disengaged in combustion, Dr. Ure on a new calorimeter for measuring the, 1839, 20.
—— of combustion, J. P. Joule on the electric origin of the, 1842, 31.
—— of combination, Dr. Andrews on the, 1843, 32.
——, notice of the progress of experiments on the conduction of, by Prof. J. D. Forbes, 1851, 7.
——, Prof. Kelland on the conduction of, 1840, 15.
—— produced by the influence of the magnet upon bodies in motion, L. Foucault on the, 1855, 11.
——, Prof. W. Thomson on certain magnetic curves with application to the theory of, 1852, 18.
——, expansion of stone by, A. J. Adie on the, 1834, 569.
——, R. Roberts on the expansion of solids by, 1850, 16.
——, J. P. Joule on the mechanical value of, 1843, 33.
——, J. P. Joule on the mechanical equivalent of, 1845, 31; 1847, 55.
——, J. P. Joule on the mechanical equivalent of, and on the constitution of elastic fluids, 1848, 21.
——, radiant, B. Stewart on, 1859, 23.
——, radiant, experiments on, involving an extension of Prévost's theory of exchanges, by B. Stewart, 1858, 23.
——, radiant, M. Melloni's experiments on, 1833, 381, 382.
——, radiant, Rev. Prof. Powell on certain points connected with discoveries relative to, 1835, 9.
——, radiation of, Dr. H. Hudson on phenomena referred to the, 1835, 9.
——, Rev. Prof. Powell on a point in the wave-theory as applied to, 1840, 14.
——, Dr. T. Woods on the amount of, produced by the combination of several metals with oxygen, 1852, 39.
——, effects of, on the colour of dissolved salts, Dr. J. H. Gladstone on the, 1857, 8.
—— evolved by a current in a conductor arranged so as to produce exterior work, L. Soret on the, 1857, 19.
—— developed by friction in air, experiments on the, by Dr. J. P. Joule, 1859, 12.
——, long-continued, Rev. W. V. Harcourt on its effects on mineral and organic substances, 1834, 576.
—— of vaporization of water, J. P. Joule on the, 1849, 1.
—— of vapours, latent, Prof. W. J. M. Rankine on practical tables of the, 1855, 208.
——, on the conductivity of various substances for, by W. Hopkins, 1857, 70.
——, on the formation of, by the union of the two fluids of electricity, 1844, 41.
——, on the products of the action of, on

animal substances, by Dr. T. Anderson, 1851, 43.
Heat, on the quantity of, developed by water when rapidly agitated, by G. Rennie, 1856, 165; 1857, 190.
——, Prof. J. D. Forbes on the use of mica in polarizing, 1839, 6.
——, Prof. Maxwell on the results of Bernoulli's theory of gases as applied to their internal friction, their diffusion, and their conductivity for, 1860, 15.
——, Rev. Prof. Powell on the refraction of, 1841, 25.
——, Prof. T. Thomson on determining its quantity in various bodies, 1836, 56.
——, Prof. W. Thomson on the sources of, generated by the galvanic battery, 1852, 16.
——, Rev. Prof. Powell on the repulsion excited between surfaces at minute distances by the action of, 1834, 549.
——, specific, J. P. Joule on, 1844, 34.
——, some new cases of phosphorescence by, Dr. T. L. Phipson on, 1859, 76.
—— and electricity, on an analogy between, by Rev. Prof. Chevallier, 1855, 10.
—— and electricity, Sir G. C. Haughton on the antagonism of, 1847, 27.
—— and elasticity, results of the hypothesis of molecular vortices as applied to the theory of, by Prof. W. J. M. Rankine, 1851, 3.
——, light, electricity, magnetism, and gravitation, on the identity of the existences or forces of, 1848, 53.
——, light, and motion, on mechanical antecedents of, by Prof. W. Thomson, 1854, 59.
Heat-diffusers, on the true action of, by A. Taylor, 1859, 244.
Heat-governor, a self-acting apparatus for regulating temperature, Dr. Ure on a, 1833, 419.
Heating by steam, W. West on, 1844, 35.
Heart, A. F. A. Greeves on the gyration of the, 1836, 120.
——, Dr. Bellingham on the motions of the, 1837, 114.
——, H. Carlile on the motions and sounds of the, 1833, 454.
—— of certain animals, Prof. Harrison on the bones in the, 1835, 85.
—— of the snail, on the beat of the, by Dr. M. Foster, 1859, 160.
——, on the action of the auriculo-ventricular valves of the, by Dr. W. T. Gairdner, 1857, 110.
Heart's action, J. E. Erichsen on the influence of the coronary circulation on the, 1842, 78.
Hectocotylus, or male of the Argonaut, Prof. Kölliker on the, 1855, 127.
Hedge plants adapted for field-enclosures in India, Dr. H. Cleghorn on, 1850, 113.
Height, effect of, on the diurnal variation of the horizontal complement of the magnetic force, J. A. Broun on the, 1850, 7.
Height, effect of, in the atmosphere, on the diurnal variation of magnetic declination, J. A. Broun on the, 1850, 7.
Heights, Col. Sykes on the measurement of, by common thermometers, 1835, 25.
——, Rev. Prof. Chevallier on the computation of, by the barometer, 1838, 38.
Helicograph, sliding, for drawing any form of Greek mouldings and ornaments, 1852, 129.
——, sliding, Penrose and Bennett's, 1852, 129.
Heliometer, on an improvement in the, by N. Pogson, 1859, 36.
Heliostat for the purpose of flashing sun signals, F. Galton on a, 1858, 15.
Helmichthys diaphanus, Prof. Kölliker on, 1855, 111.
Helm wind of Crossfell, Rev. J. Watson on the, 1838, 33.
Hemmings (J.) on a safety tube for the oxy-hydrogen blowpipe, 1831–32, 577.
Hepaticæ, Prof. Allman on the fruit of some of the, 1845, 71.
Herodotus, Rev. Dr. Hincks on the eclipse of the sun mentioned in the first book of, 1856, 27.
Herring, J. M. Mitchell on the economical history and statistics of the, 1860, 191.
—— fisheries, on the fluctuations in the, by J. Cleghorn, 1854, 134, 176.
Hip-joint, on the use of the round ligament of the, by Dr. J. Struthers, 1855, 135.
Hippocrates, on the Macrocephali of, by Dr. Minchin, 1857, 146.
Hippopotamus, H. Denny on the remains of the, found in the Aire Valley deposit near Leeds, 1853, 51.
Hippuris, Dr. Lankester on the epidermal appendages of the genus, 1850, 113.
Hirudo medicinalis and other leeches, on the admixture of nervous and muscular fibres in the nerves of the, by Prof. Redfern, 1859, 174.
'Historia Cœlestis' (Flamsteed's), account of some MS. letters relative to, 1833, 462.
Hogan (Rev. A. R.) on British well-shrimps, 1860, 116.
Holoptychius Andersoni, fossil fish, from the Dura Den sandstones, 1858, 95.
—— nobilissimus, from the old sandstone of Clashbennie, Fifeshire, 1836, 94.
—— Sedgwicki, 1852, 55.
Holothuria, Sir J. G. Dalyell on the, 1840, 139.
—— grandis, new species, 1839, 80; H. fucicola, 80; H. brevis, 80; H. fusiformis, 80; H. lactea, 80; H. pellucida, 80.
—— squamata, new to the British seas, 1844, 64.
—— with twenty tentacula, C. W. Peach on a, 1844, 65.
Homogeneous colours, Prof. Helmholtz on the mixture of, 1853, 5.
Homoiozoic belts, Prof. E. Forbes on the, 1852, 73.

Homologies and notation of the dental system in Mammalia, Prof. Owen on the, 1848, 91.
—— of Lepismidæ, Prof. Dickie on the, 1855, 110.
——, vertebral, in animals, Prof. W. Macdonald on the, 1855, 128.
Homology, on the value of the origins of nerves to, 1848, 93.
—— of the human skeleton, in relation to the skeletons of the various vertebrate classes, and in relation to its development and connexion with the nervous system, by G. M. Humphry, 1858, 126.
Hoplegnathus, a scaroid fish, from Van Diemen's Land, Sir J. Richardson on, 1841, 71.
Horse, wild, of Tibet, 1857, 107.
Hosiery trade, machine-wrought, on the statistics of the, 1844, 91.
Hospitals for the insane, in Bengal, on the statistics of, 1844, 89.
Hot-air baths, on, 1857, 110.
Hot-springs, Dr. Daubeny on their connexion with volcanos, 1831–32, 83.
—— of the Pyrenees, Prof. J. D. Forbes on the, 1836, 83.
Hot water in warming buildings, G. Gurney on the possibility of fire from the use of, 1841, 49.
Houses, on a register hygrometer for regulating the atmospheric moisture of, by J. G. Appold, 1850, 170.
—— for the labouring classes, on, 1860, 194, 196.
Hoylake antiquities, notices of the, by Rev. Dr. Hume, 1854, 129.
Human art, on the occurrence of works of, in post-pliocene deposits, by Sir C. Lyell, 1859, 93.
—— body, on the form and dimensions of the, by J. Macdonald, 1855, 127.
—— form, R. D. Hay on the geometrical basis of beauty as applied to the, 1850, 131.
—— frame, J. Bonomi on an apparatus for measuring and registering two dimensions of the, 1845, 76.
—— hand, an index of mental development, 1857, 118.
—— life, Dr. Addison on the forces concurring in the phenomena of, 1847, 89.
—— race, on varieties of the, 1841, 75.
—— race, Dr. Hodgkin on the varieties of the, 1842, 70.
—— race, Dr. Latham on the state of philological evidence as to the unity of the, 1845, 78.
—— race, on the probable migrations and variations of the earlier families of the, by Admiral FitzRoy, 1857, 130.
—— races in India and Upper Asia, H. Schlagintweit on some, 1857, 151.
—— species, Prof. Owen on the varieties of the, 1854, 111.
—— remains in superficial drift, Rev. Dr. Anderson on, 1859, 95.
Human skeleton, on the homology of the, by G. M. Humphry, 1858, 126.
Humber deposits, J. D. Sollitt on the chemical constitution of the, 1853, 49.
Humic acid from peat, Prof. Johnston on, 1840, 83.
Humming-birds from the Andes, notice of new species of, 1846, 79.
——, J. Gould on a new species of Cometes, a genus of, 1853, 68.
Hurricanes, Lieut.-Col. Reid on the phenomena of, 1838, 21.
——, tropical, Dr. J. Taylor on, 1852, 31.
—— in the West Indies and the North Atlantic from 1493 to 1855, 1855, 150.
Husbandry, Croft, account of the system of, adopted at Gairloch in Ross-shire, by Dr. Alison, 1850, 147.
Hyalite from Mexico, Dr. Apjohn on the composition and optical properties of a variety of, 1847, 31.
Hybernation of snails, on the, 1846, 83.
Hydatid, Dr. Houston on a variety of, 1835, 83.
Hydra tuba, the trumpet polypus, J. G. Dalyell on the propagation of, 1834, 599.
—— viridis, Prof. Allman on the structure of, 1853, 64, 66.
Hydrate of cresyl, gradual reduction of, into hydrate of phenyl and other compounds through the agency of chloride of calcium or zinc, Dr. Gladstone on the, 1860, 69.
—— of phenyl, gradual reduction of hydrate of cresyl into, through the agency of chloride of calcium or zinc, Dr. Gladstone on the, 1860, 69.
Hydraulic apparatus, new, by Mr. Jeffrey, 1840, 213.
—— belt, Hall's, for raising water, notice of, 1840, 213.
Hydriodic acid, Dr. R. W. Glover on preparing, 1840, 75.
Hydrobromic acid, Dr. G. Wilson on the decomposition of terchloride and termuriate of gold by, 1839, 42.
—— acid, Dr. R. W. Glover on preparing, 1840, 75.
Hydrochloric and nitric acids, Dr. S. Macadam on the presence of lead in, 1854, 72.
Hydrocyanic acid, Dr. R. D. Thomson on its preparation for medical use, 1841, 54.
—— acid, on its comparative action on albumen and caseine, by A. Gages, 1859, 162.
—— acid, Prof. Geoghegan on a method of testing the presence of muriatic acid in, 1835, 45.
Hydrodynamics, J. S. Russell on the reduction of an anomalous fact in, 1834, 531.
——, Prof. Stokes on the resistance of a fluid to two oscillating spheres, 1847, 6.
Hydro-electric chain battery, M. Pulvermacher's, 1851, 52.
—— machine, W. G. Armstrong's, 1843, 39.

Hydro-electric machine, colossal, W. G. Armstrong on a, 1845, 30.
Hydrofluoric acid, Napier's process of etching glass in relief by, 1859, 88.
Hydrogen, quasi-metallic character of, 1833, 43.
——, Rev. T. Exley on the specific gravity of, 1838, 64.
——, Prof. E. Davy on a new gaseous bicarburet of, 1836, 62.
—— gas, on its application in the manufacture of iron, 1838, 68.
—— gas, W. Maugham on an attempt to liquefy, 1838, 73.
—— and carbon, Prof. E. Davy on a new gaseous compound of, 1837, 50.
—— and carbon, W. Maugham on a new compound of, 1838, 72.
—— and its compounds, W. R. Grove on the peculiar cooling effects of, in cases of voltaic ignition, 1848, 54.
—— and oxygen, Rev. T. Exley on the combination of, 1838, 68.
——, sulphuretted, Dr. Lankester on the production of, 1841, 57.
——, sulphuretted, on its action on salts of zinc and copper, by Prof. F. C. Calvert, 1855, 51.
Hydrography of the British Isles, A. Petermann on the, 1848, 73.
Hydrophobia, observations on, by Dr. Dalzell, 1850, 129.
Hygrometer, dew-point, improvements in a, by Prof. Connell, 1855, 38.
——, Leslie's, with a new scale, H. H. Watson on the use of, 1834, 569.
——, register, for regulating the atmospheric moisture of houses, J. G. Appold on a, 1850, 170.
Hygrometers, self-registering, E. Vivian on results of, 1860, 55.
Hygrometric formula usually applied to observations made with wet and dry barometers, Dr. Apjohn on a method of testing the, 1843, 36.
—— moisture in the air, Dr. Andrews on an apparatus for determining the quantity of, 1851, 29.
Hygrometrical calculations, description of a sliding-rule for, by J. Welsh, 1851, 42.
Hylurgus piniperda, some remarks on, 1836, 98.
Hymenocaris, fossil, new genus, description of the, by J. W. Salter, 1852, 58; H. vermicauda, 58.
Hypanthocrinite, Prof. Buckman on the discovery of a new species of, in the upper Silurian strata, 1846, 61.
Hypanthocrinites granulatus, 1847, 61.
Hyperbola, equilateral, H. F. Talbot on a new property of the, 1836, 2.
——, rectangular, G. Thurnell on a mode of constructing the, by points, 1858, 5.
Hyperconic sections and elliptic integrals, Rev. J. Booth on the relations between, 1860, 4.
Hypericum linarifolium, Vahl, new to the English flora, 1839, 92.
Hyperodapedon Gordoni, from the neighbourhood of Elgin, Prof. Huxley on, 1859, 261.
Hypochlorites of lime, soda, or potash, Dr. A. P. Price on the amount of available chlorine in, 1853, 48.
Hyposulphites of the organic alkalies, H. How on the, 1854, 70.
Hypoxanthite, new mineral, 1855, 70.
Hysteria, observations on, by Dr. Dalzell, 1850, 129.

Ice at its melting-point, Prof. J. Thomson on recent theories and experiments on, 1859, 23.
——, production of, in a vessel at a glowing red heat, M. Boutigny on the, 1845, 27.
——, on the plasticity of, by Prof. J. Thomson, 1857, 39.
——, glacier, Prof. J. D. Forbes on an attempt to establish the plastic nature of, 1844, 24.
Ice-action observed in the north of Scotland, Prof. J. Nicol on, 1855, 88.
—— as observed in the Hudson's Bay and Straits, by Dr. J. Rae, 1860, 174.
Icebergs, Dr. J. Rae on the formation of, in the Hudson's Bay and Straits, 1860, 174.
Ichneumon, J. Blackwall on a species of, whose larva is parasitic on spiders, 1842, 68.
Ichthyolites and Crustacea in the tilestones of Kington, Herefordshire, R. Banks on the discovery of, 1855, 78.
—— of Farnell Road, Forfarshire, Sir P. de M. G. Egerton on the, 1860, 77.
Ichthyosauri, on the skin and food of, by C. Moore, 1856, 69.
Ichthyosaurus and other fossils, on the discovery of, in the Arctic searching expedition, 1852–54, by Capt. Sir E. Belcher, 1855, 79.
—— in the lias limestone, near Tewkesbury, discovery of an, 1839, 70.
——, jaws of an, from the chalk in the neighbourhood of Cambridge, Mr. Carter on the, 1845, 60.
——, Prof. Owen on the teeth of the, 1838, 144.
——, Prof. Strickland on an anomalous structure in the paddle of an, 1844, 51.
—— missouriensis, 1833, 440.
—— tenuirostris from the lias of Somersetshire, 1831–32, 587.
Icosian calculus, Sir W. R. Hamilton on the, 1857, 3.
Idocrase, T. Richardson on the composition of, 1839, 52.
Idiocy, Dr. Gaskell on the want of educational establishments for, 1847, 97.
——, infantile, Dr. Coldstream on, 1850, 128.
Idiots, infantile, in the United Kingdom,

Dr. Tilt on ascertaining the number and condition of the, 1851, 109.
Iguanodon, Dr. Mantell on the upper jaw of the, 1850, 125.
——, Prof. Owen on the teeth of the, 1838, 144.
Ileus, Sir D. J. H. Dickson on a case of, 1839, 95.
Illuminating opake objects, C. Brooke on a mode of, under the highest powers of the microscope, 1851, 7.
Images, electrical, Prof. W. Thomson on, 1847, 6.
—— produced by lenses and mirrors of different sizes, Sir D. Brewster on the form of, 1852, 3.
Imaginary quantities, Sir W. R. Hamilton on conjugate functions, or algebraic couples, as illustrating the doctrine of, 1834, 519.
Impact and collision, Prof. E. Hodgkinson on, 1835, 107.
—— on beams, Prof. E. Hodgkinson on the effect of, 1833, 421.
Impurities, on the use of the prism in detecting, by Dr. J. H. Gladstone, 1857, 48.
Incrustation from boilers of steam-engines, Dr. J. Davy on the, 1850, 51.
Incrustations of blast furnaces, Prof. F. C. Calvert on the, 1856, 50.
Incubation, on the changes and chemical composition of eggs during, 1848, 89.
India-rubber, cause of the black colour in, 1854, 96.
——, artificial, 1855, 103.
—— and gutta percha, as insulators for subaqueous telegraphic wires, S. W. Silver on, 1860, 212.
Indian seas, Dr. Buist on the currents of the, 1853, 12.
—— tribes of Texas, W. Bollaert on the, 1846, 116.
Indians, Bethuck, of Newfoundland, Dr. Latham on the language of the, 1846, 115.
——, Comanche, of Texas, W. Bollaert on the, 1846, 116; Dr. Latham on a vocabulary of the, 117.
——, Mr. Sullivan on the tribes of, inhabiting the country explored by the British North American expedition in the years 1857–59, 1860, 173.
Indicator, steam-engine, J. Hopkinson on the, 1853, 118.
——, steam-engine, Rous's, 1843, 101.
Indices, refractive, Rev. Prof. Powell on the theoretical computation of, 1841, 24.
——, refractive, of several substances, Rev. Prof. Powell on the, 1850, 14.
Indigestion, alkaline, Dr. R. D. Thomson on, 1839, 107.
Indigo, on the supposed formation of valerianic acid from, 1844, 33.
——, real, in the indigos of commerce, Dr. Dana on determining the quantity of, 1841, 49.
Indo-European languages, Rev. Dr. E. Hincks on the, 1860, 156.
Indo-Germanic theory of races, J. Crawfurd on the, 1860, 154.
Induction and conduction, Sir G. C. Haughton on the nature of, 1847, 27.
—— in long submarine lines of telegraph, Prof. W. Thomson on the effects of, 1857, 21.
—— coils, Whitehouse's, 1857, 21.
—— coil, improved, W. Ladd on an, 1858, 26.
—— apparatus, powerful, devised by E. S. Ritchie, Prof. W. B. Rogers on the, 1857, 15.
—— machine, electro-dynamic, Rev. Prof. Callan on the, 1857, 11.
——, electro-magnetic, Prof. W. Thomson on the theory of, 1848, 9.
Industrial classes, on the investments of the, by Dr. J. Bateman, 1858, 168.
Infinite series, diverging, Prof. Young on, 1844, 1.
—— series, Mr. Rawson on the summation of, 1844, 2.
Inflammation, Dr. Alison on, 1834, 674.
——, gouty, Dr. A. B. Garrod on, 1859, 165.
——, local, Dr. Perry on, 1840, 159.
Influenza of 1833, G. H. Fielding on the peculiar atmospherical phenomena during the prevalence of the, 1833, 461.
——, epidemic, of 1837, Dr. Black on the, 1837, 115.
Infusoria, Dr. Lankester on deposits in springs, rivers, and lakes, from the existence of, 1841, 72.
——, on the occurrence of peculiar organs resembling thread-cells in the, by Prof. Allman, 1854, 105.
Infusorial animalcules, J. Samuelson on the development of, 1856, 98.
Insane, hospitals in Bengal for the, on the statistics of, 1844, 89.
Insanity, on the liability to, at different ages, by Dr. Thurnam, 1845, 87.
——, on the relative liability of the two sexes to, by Dr. Thurnam, 1844, 92.
Insects, Rev. W. Hope on the modern classification of, 1838, 113.
——, social, on the development of sex in, by Rev. W. Leitch, 1855, 111.
——, on the power by which they are enabled to adhere to smooth perpendicular surfaces, by Dr. T. Inman, 1854, 109.
——, W. Herapath on the lithiate of ammonia as a secretion of, 1836, 70.
——, Persian, J. Wilson on some, 1840, 136.
——, J. O. Westwood on certain blind species of, 1847, 81.
——, blind, of Mitchelstown Caves, Dr. E. P. Wright on the, 1857, 108.
—— which attack books, &c., Sir T. Phillips on a method of destroying, 1837, 99.
—— for the cabinet, G. B. Buckton on the

application of cyanide of potassium to killing, 1854, 106.
Insects, some of the early notions of antiquity derived from, 1836, 99.
—— in the lower beds of lias of Gloucestershire, Rev. P. B. Brodie on the discovery of, 1842, 58.
——, fossil, of the secondary formations of Britain, Prof. Strickland on the, 1845, 58.
Insessores, J. Hogg on the classification of the, 1846, 77.
Instinct in birds, Rev. F. F. Statham on a curious exemplification of, 1853, 71.
Insulator, on gutta percha as an, at various temperatures, by F. Jenkin, 1859, 248.
Integral calculus, H. F. Talbot on the, 1836, 1.
Integrals, definite, Rev. H. Moseley on a machine for calculating the numerical values of, 1841, 35.
——, elliptic, and hyperconic sections, Rev. J. Booth on the relations between, 1860, 4.
Integrating machine, Rev. Prof. Moseley's, 1841, 35.
Integration, elliptic, R. Rawson on, 1849, 4.
Interference, Rev. Prof. Powell on an experiment of, 1840, 14.
——, on a fictitious displacement of fringes of, by Prof. Stokes, 1850, 20.
—— of light: phenomena produced by decomposed glass found at Nineveh, Sir D. Brewster on, 1860, 9; at Oxford, by R. Thomas, 19.
——, sonorous, R. Addams on a new phenomenon of, 1834, 557.
Intestinal canal, Dr. O'Beirne on the functions and diseases of the, 1835, 105.
—— obstruction, Dr. Olliffe on, 1843, 82.
Intestine, on the occurrence of leucine and tyrosine in the contents of the, by Prof. Kölliker, 1855, 124.
Intestines, human, Dr. Bellingham on the occurrence of crystals in, 1838, 134.
——, human, Dr. D. Williams on Limax variegatus in the, 1837, 98.
——, on a peculiar structure discovered in the epithelial cells of the, and on the absorption of fat into the system, by Prof. Kölliker, 1855, 126.
Inundations, great, T. Dobson on the causes of, 1856, 31.
Invertebrata inhabiting the Ægean Sea, Prof. E. Forbes on two remarkable, 1841, 72.
—— of Orkney and Shetland, Profs. E. Forbes and J. Goodsir on the, 1839, 79.
—— of the tertiary and alluvial basin of the Middle Rhine, 1843, 55.
Invertebrate fauna of the lower oolites of Oxfordshire, J. F. Whiteaves on the, 1860, 104.
Iodide of gold, Prof. Johnston's analysis of the, 1835, 45.
—— of silver, R. Hunt on the influence of ferrocyanate of potash on the, as a photographic preparation, 1841, 47.
Iodides, Dr. A. T. Thomson on the medicinal and poisonous properties of the, 1838, 123.
Iodine, on its distribution in the mineral, vegetable, and animal kingdoms, by Dr. S. Macadam, 1854, 72.
——, Prof. F. Penny on the estimation of, 1852, 37.
——, Prof. T. Thomson on its manufacture at Glasgow, 1840, 63.
——, solution of, in ammonia, 1857, 55.
—— from kelp, on the manufacture of, by Prof. F. Penny, 1855, 69.
——, Dr. J. Inglis on the conducting powers of, 1836, 64.
—— and caustic soda, Prof. F. Penny on a new salt obtained from, 1840, 80.
—— and codeine, Dr. T. Anderson on a compound of, 1850, 48.
—— and fluorine, Rev. T. Knox on the relative electro-negative powers of, 1843, 39.
Ireland, on additions to the fauna of, 1848, 125.
Iridescent phenomenon seen on Windermere lake, J. C. Mounsey on a singular, 1855, 41.
Iris, concentric, W. Gray, jun., on a, 1853, 26.
—— seen on the surface of water, J. J. Walker on the, 1859, 29.
Iriscope, Dr. J. Read on the, 1840, 14.
Irish bog butter, J. S. Brazier on, 1852, 35.
—— crania, notes upon a collection of, by J. Grattan, 1852, 84.
—— Silurian fossils, J. W. Salter on a few genera of, 1852, 59.
Iron exposed to long-continued vibration, W. Lucas on the alteration in, 1844, 41.
——, W. Fairbairn on the effects of weights acting for an indefinite time upon bars of, 1839, 126.
——, E. Cowper on a new mode of obtaining a blast of very high temperature in the manufacture of, 1860, 204.
——, E. C. Nicholson and Dr. D. S. Price on the estimation of, by the method of Marguérite, 1854, 74.
——, G. Crane on the smelting of, with anthracite coal, 1837, 52.
—— smelting in Glasgow, Prof. T. Thomson on, 1840, 58.
—— immersed in salt water, J. B. Hartley on preventing its corrosion, 1837, 56.
——, Prof. E. Davy on the corrosion of, in sea-water, 1835, 34, 36.
——, Mr. Mushet on the deoxidation of, 1836, 64.
——, Prof. T. Thomson on foreign substances in, 1838, 41.
——, on the effects of mechanical strain on the thermo-electric quality of, by Prof. W. Thomson, 1855, 17.
——, on the strength of, after repeated meltings, by W. Hawkes, 1854, 151.
——, strength of, and its application as a

substitute for wood in ship-building, W. Fairbairn on the, 1840, 201.
Iron beams, on the strength and best forms of, by Prof. E. Hodgkinson, 1831–32, 610.
——, Prof. Penny on a process for the quantitative determination of, 1850, 58.
——, Rev. Dr. Scoresby on its susceptibility for the magnetic condition, 1836, 28.
—— for railways, D. Mushet on the quality of, 1837, 134.
——, J. S. Dawes on an improvement in the manufacture of, 1838, 68.
——, manufacture of, by purified coke, Prof. F. C. Calvert on the, 1855, 49.
——, peroxide of, Prof. Barker on its separation from sulphuric or muriatic acid, 1835, 52.
——, protocarbide of, for the purification of water, T. Spencer on, 1859, 85.
——, cast, on the absence of magnetism in, when in fusion, by R. W. Fox, 1835, 33.
——, cast, analytical investigations of, by F. C. Wrightson, 1849, 49.
——, cast, Dr. Clark on the application of the hot blast to the production of, 1834, 578.
——, cast, H. Cox on the hyperbolic law of elasticity of, 1850, 172.
——, cast, Prof. E. Hodgkinson on the strength of, 1833, 423.
——, cast, Prof. E. Hodgkinson on the strength of pillars of, 1840, 202.
——, cast, W. Fairbairn on the mechanical properties of, as derived from repeated meltings, 1852, 125.
——, C. May on the process of chill casting, 1851, 114.
——, chilled cast, C. May on its application to the pivots of astronomical instruments, 1851, 114.
——, cast and malleable, and steel, Dr. Schafhaeutl on the relative combinations of the constituents of, 1839, 49.
——, cast, and steel bars, Rev. Dr. Scoresby on a new process of magnetic manipulation and its action on, 1844, 12, 100.
——, cast and wrought, steel and timber, Prof. E. Hodgkinson on the comparative strengths of, 1840, 206.
——, carbonaceous, Prof. Johnston's method of analysing, 1833, 400.
——, French gray, and white Welsh, analysis of, 1839, 52.
——, liquid red-hot, notice of M. Boutigny passing his hand through a stream of, 1851, 44.
——, magnetized, on the electric qualities of, by Prof. W. Thomson, 1857, 17.
——, malleable, for beams or girders, T. M. Gladstone on, 1852, 126.
——, metallic, in certain basaltic and metamorphic rocks, Prof. T. Andrews on the occurrence of, 1852, 34.
——, meteoric, Dr. Shepard's observations on, 1839, 54.
——, taper, W. Clay on a machine for rolling, 1854, 148.
Iron, titaniferous, of the Mersey shore, Dr. J. B. Edwards on the, 1855, 61.
——, fused wrought, E. Riley on, 1857, 57.
——, wrought, produced by cementation from cast iron, Prof. W. A. Miller's analysis of, 1848, 55.
——, wrought, and steel, experiments by Messrs. R. Napier and Sons to determine the strength of, condensed abstract of, by Prof. Rankine, 1859, 242.
—— ore and iron of Yorkshire, R. Hunt on the, 1858, 181.
—— ore, Blenheim, E. Hull on the, 1860, 81.
—— ore, Mr. Mushet on a metallic cement from, 1836, 65.
—— ore, magnetic, Prof. T. Andrews on a new variety of, 1852, 41.
—— ores called "brass," on the chemical composition of, by E. C. Nicholson and Dr. D. S. Price, 1855, 66.
—— ores of North Lancashire and West Cumberland, Prof. Phillips and R. Baker, jun., on the, 1858, 106.
——, pig, Mr. Hartop on the hot-air blast in the manufacture of, 1835, 52.
——, pig, on a few facts connected with the manufacture of, in the neighbourhood of Leeds, by W. J. Armitage, 1858, 204.
—— plates and riveted plates, experiments on the strength of, by W. Fairbairn, 1840, 201, 202.
—— plates, unwrought, W. Fairbairn on the tensile strength of, 1852, 125.
—— slag, ancient, on the chemical composition of an, by John J. J. Kyle, 1857, 52.
—— and carbon, Dr. Bromeis on the compounds of, 1842, 34.
—— and copper, native sulphate of, in Cronebane copper-mine, 1837, 47.
—— and potassium, Prof. F. C. Calvert and R. Johnson on alloys of, 1855, 50.
—— combined with aluminium, on two new alloys of, by Prof. F. C. Calvert and R. Johnson, 1855, 50.
Irons and steels, on the manufacture of, as applied to gun-barrels, swords, and railway axles, by W. Greener, 1849, 115.
Ironstone, black band (Mushet band), of the coal-field of Scotland, 1846, 62.
Iron steamships, G. B. Airy on correcting the local magnetic action of the compass in, 1838, 21.
—— vessels exposed to severe strain, W. Fairbairn on the construction of, 1851, 113.
—— trade, G. R. Porter on facts respecting the, 1845, 91.
—— trade in Scotland, Dr. A. Watt on the, 1845, 90.
—— trade of Leeds, J. Kitson, jun., on the, 1858, 183.
—— and coal trade of Scotland, on the progress, extent, and value of the, by Dr. Strang, 1855, 193.
Iron-works, Mersey, on the large fly-wheel erected at the, 1854, 147.

Irradiation, Rev. Prof. Powell on, 1849, 9.
Irrigation, on the employment of natural waters containing phosphoric acid in, by Dr. A. Voelcker, 1850, 63.
Irrisor, Lesson, and Upupa, Linn., Prof. Strickland on the structure and affinities of, 1843, 70.
Isoclinal lines in England, Rev. Dr. Lloyd on the direction of the, 1836, 31.
—— lines in Yorkshire, Prof. Phillips on the direction of, 1836, 31.
—— magnetic lines in Yorkshire, Prof. Phillips on, 1850, 14.
Isograph, a new instrument, by T. Sopwith, 1838, 155.
Isomeric compound, new, Prof. Johnston on a, 1836, 67.
Isomerism, Prof. Graham on the doctrine of, 1834, 579.
Isometrical projection, T. Sopwith on instruments to facilitate the process of, 1838, 155.
—— protractor, T. Sopwith's, 1838, 155.
Isomorphism, Prof. Johnston on some supposed exceptions to the law of, 1838, 59.
Isomorphous relations of the elements and their physiological action, Dr. J. Blake on the connexion between the, 1846, 40.
—— relations of silica and alumina, Prof. Chapman on the, 1850, 50.
Isopoda, terrestrial, Prof. Kinahan on certain genera of, 1857, 104.
Isothermal lines (as represented on Dove's maps), T. Hopkins on the causes of the rise of the, in the winters of the northern hemisphere, 1850, 34.
—— lines, Prof. Hennessy on, 1856, 39.
—— lines, simultaneous, Prof. Hennessy on, 1857, 29.
Iulus of Linnæus, J. F. Brandt on the genus, 1840, 137.
Ivory, fossil, Dr. G. O. Rees on fluorine in, 1839, 57.
——, softened, Dr. Güterbock on instruments made from, 1839, 109.
——, vegetable, Dr. Lankester on, 1845, 70.
——, vegetable (Phytelephas macrocarpa), on some uses to which it is applied, by Dr. G. Bennett, 1859, 130.

Jaczwings, a population of the 13th century, Dr. R. G. Latham on the, 1860, 163.
Jaundice, Dr. Thudichum on nitric and nitro-hydrochloric acids in, 1860, 148.
Jelly fishes, notice of, by Dr. Lankester, 1853, 69.
Jerboa rat, Dr. J. E. Gray on a new genus of, 1841, 70.
Jet, Prof. Rowney on the composition of, 1860, 72.
Jet-pump, on a, 1852, 130.
——, on an experimental apparatus constructed to determine the efficiency of the, by Prof. J. Thomson, 1853, 130.
Jews, Karaïte, notice of the, by J. Hogg, 1859, 181.
Johnson's (H.) instrument for describing spirals, 1858, 207.
Johnson's (H.) deep-sea pressure-gauge, 1860, 202.
Joint-stock banks, reasons for extending limited liability to, 1857, 165.
—— companies and joint-stock banks, W. Newmarch on the legislation relative to, 1857, 166.
Joints, Prof. Syme on excision of diseased, 1834, 684.
Jupiter, on the satellites of, 1831–32, 87.
——, notice relative to the discovery of the satellites of, 1831–32, 613.

Kakodyle, Prof. Bunsen on, 1840, 77.
Kakodyle series, Prof. Bunsen on the radical of the, 1841, 55.
Kakodylic acid and the sulphurets of kakodyle, Prof. Bunsen on, 1842, 35.
Kapnomor, a product of destructive distillation, Dr. Reichenbach on, 1834, 592.
Karaïte Jews, J. Hogg on the, 1859, 181.
Kelp and kelp liquor, Dr. F. Penny on, 1852, 37.
——, on the manufacture of, by Dr. W. Wallace, 1859, 88.
——, on the manufacture of iodine and other products from, by Dr. F. Penny, 1855, 69.
Kent's cavern, researches in, with extracts from the original MS. memoir of its first opening, by E. Vivian, 1856, 78; on the earliest traces of human remains in, 119.
Keuper sandstone of Longdon, Worcestershire, Prof. Strickland on vegetable remains in the, 1849, 66.
—— sandstone, J. Plant on the discovery of beds of, containing zoophytes, in the vicinity of Leicester, 1849, 64.
Keyserling's (Count) Geology of the N.E. extremity of Russia in Europe, Sir R. I. Murchison on, 1847, 65.
Kilns, destructive effect on the brick casing of, by moisture, at an intense heat, 1840, 125, 126.
Kimmeridge clay of the neighbourhood of Cambridge, Rev. Prof. Sedgwick on the, 1845, 42.
Kingoodie (Mylnfield) quarry, North Britain, on a nail found in a block of sandstone from, 1844, 51.
Klinology, in reference to the Bavarian Alps, Dr. Schafhaeutl on, 1851, 69.
Klinometer, new, J. Dunn on a, 1834, 594.
Koh-i-noor diamond, Dr. Beke on a slab supposed to have been cut from the, 1851, 44.
—— diamond, Prof. Tennant on the, 1852, 39, 41.
—— diamond, Prof. Tennant on the recutting of the, 1854, 75.
Koloochian class of American Indians, A. K. Isbister on the Nehanni tribe of the, 1847, 121.

Kosman's patent cistern as a sanitary machine, 1849, 134.
Kreosote, a product of destructive distillation, Dr. Reichenbach on, 1834, 591.

Labour, free and slave, in the West Indies, on the question whether there are any impediments to the competition of, 1852, 117.
Labourers, results of a scheme by Mr. Vandaleur for improving their condition, 1847, 98.
Labouring classes, H. Roberts on various efforts to improve the domiciliary condition of the, 1860, 196.
Labyrinthodon from the new red sandstone of Warwickshire, Dr. G. Lloyd on a new species of, 1849, 56.
——, Rev. W. Lister on footprints of the, from the new red sandstone north of Wolverhampton, 1860, 87.
Lac-dye, process for the valuation of, 1855, 69.
Lactation, Dr. M'William on the use of the Bofareira (Ricinus communis) as a means to excite, 1850, 132.
——, on a case of, in an unimpregnated bitch, by Dr. J. Adamson, 1859, 159.
Lacteal fluid, on the flow of the, in the mesentery of the mouse, by J. Lister, 1857, 114.
Lacustrine beds, Rev. Mr. Schoolcraft on the production of, 1842, 42.
Lakes of India, Prof. Royle on the vegetation of the, 1846, 74.
Lamellibranchiata, Dr. T. Williams on the structure of the branchiæ and mechanism of breathing in the Pholades and other, 1851, 82.
Lamellibranchiate Mollusca, British, Prof. E. Forbes on the families of, 1847, 75
Laminaria saccharina, E. G. Schweitzer on the analysis of, 1845, 37, 38.
Lamna, Prof. Owen on the teeth of the genus, 1838, 141.
Lamp, electric, improved, 1858, 55.
——, oil-gas, on an, 1831–32, 88.
——, safety, Clegg's, 1840, 210.
——, safety, new, 1839, 64.
——, submarine, Mr. Kettle on a, 1859, 236.
Lamps, H. Dircks on the shape of glass chimneys for, 1843, 98.
——, safety, for mines, Dr. Arnott on, 1837, 54.
Lampic acid, Prof. Connell on the nature of, 1846, 40.
Lancelot, two specimens taken off the Isle of Man, 1838, 110.
Land, on recent improvements in machines for tilling, by B. Samuelson, 1853, 121.
—— and water, on the relative distribution of, as affecting climate at different geological epochs, by Prof. Hennessy, 1856, 66.
Land measures, on a decimal arrangement of, by P. Gale, 1855, 165.
Lands, low, Mr. Fairbairn on raising water from, 1840, 210.
Landscape, on the failure of bright-coloured flowers in forest trees to produce pictorial effect on the, unless accompanied by abundance of green leaves, by Dr. G. Buist, 1859, 130.
Langlard (M.), the Georama invented by, 1846, 73.
Language, Assyrian, Rev. Dr. E. Hincks on the, 1852, 87.
—— of the Assyrians, Rev. Dr. E. Hincks on the, 1857, 134.
——, Botocudo, Dr. Latham on the, 1847, 123.
——, Egyptian, Rev. Dr. E. Hincks on the, 1857, 134.
—— and mode of writing of the ancient Egyptians, Rev. Dr. E. Hincks on the, 1850, 140.
——, English, J. Crawfurd on the oriental words adopted in the, 1849, 84.
——, Fazoglo, on the, 1847, 124, 126.
——, Fazoglo, Dr. Tutschek on the, 1848, 100.
—— of Finland, on the character, extent, and ethnological value of the Indo-European element in the, by R. Cull, 1857, 127.
——, Ghadamsi dialect of the Berber, Dr. Latham on the, 1847, 124.
—— of the gipsies, Rev. T. R. Norwood on the, 1858, 195.
——, Moskito, Dr. Latham on the, 1847, 123.
——, Semitic and Indo-Germanic, Rev. Prof. Jarrett on the lexicography of the, 1847, 122.
——, Shyenne, Dr. Latham on the, 1847, 123.
——, Tumali, Dr. Latham on the, 1847, 123.
——, Tumali, Dr. Tutschek on the, 1848, 100.
—— no test of race, by Rev. G. C. Geldart, 1858, 150.
——, on the misapplication of the terms 'evolution' and 'development,' as applied by ethnographical philologists to the inflexions of a, by R. Cull, 1852, 82.
——, varieties of, and physical conformation, on the general distribution of the, by Dr. Latham, 1858, 151.
Languages, Galla, Tumali, and other African, C. Tutschek on the, 1847, 126.
——, Guianian, comparative vocabulary of, 1848, 96.
——, Indian, European, Syro-Arabic, and Egyptian, Rev. Dr. E. Hincks on the forms of the personal pronouns of the two first persons in the, 1852, 88.
——, Semitic, Rev. Dr. E. Hincks on the, 1857, 134.
——, Sicilian and Sardinian, J. Hogg on the, 1850, 140.
——, unwritten, Sir R. H. Schomburgk on a uniform system to reduce, to alphabetical writing in Roman characters, 1848, 99.
——: of Africa, 1844, 79; of America, 83.

Languages of the eastern coast of Africa, the Chevalier Bunsen on, 1847, 119.
——, on Medo-Persic philology, by Prof. MacDouall, 1852, 90.
Lanthanium, a new metal, Prof. Mosander on, 1843, 25.
Laomedea, on a new British species of (L. angulata), and on the genera Campanularia and Laomedea, by Rev. T. Hincks, 1858, 126.
—— tenuis (new species), Prof. Allman on, 1859, 143.
Laplace's functions, G. Boole on the equation of, 1845, 2.
Lapps and Finns in Norway, table of the, according to the census returns, by Dr. L. K. Daa, 1856, 139.
Larva, annelidan, peculiar, 1852, 70.
——, locomotive, of Plumatella fruticosa, Prof. Allman on the, 1847, 74.
—— of certain Acari, Prof. Allman on the, 1847, 74.
Larvæ of Callidium bajulum, Rev. L. Jenyns on timber attacked by the, 1847, 85.
Lathyrus odoratus, Dr. Lankester on a monstrosity of, 1851, 72.
Latitude, the line of north and south, and chronometer time, W. Carlile on dials which give the, 1858, 41.
Latris, a new genus of marine fish, from Van Diemen's Land, Sir J. Richardson on, 1841, 71.
Laurineæ, Sir R. Schomburgk on two new species of, 1844, 72.
Lavatera arborea, the woody fibres of, suggested to be of use in arts and manufactures, 1846, 90.
Lead, acetate of, and sulphurous acid, as purifying agents in the manufacture of sugar, Dr. Scoffern on, 1850, 60.
——, acetate of, Prof. Connell on the precipitate caused in spring and river waters by, 1847, 48.
——, basic acetates of, and sulphurous acid, on the combined use of the, in the manufacture of sugar, by Dr. Scoffern, 1849, 42.
——, Prof. T. Thomson on native diarseniate of, 1838, 46.
——, nitrate of, precipitated from water by nitric acid, 1835, 54.
——, oxalate of, with nitrate of lead, on a new compound of, 1837, 52.
——, protoxide of, atomic weight of, 1839, 44.
——, sulphate and nitrate of, atomic weight of, 1839, 45.
——, Dr. W. Gregory on the sulphite of, 1850, 55.
——, sulphuretted sulphate of, from Dufton, examination of, 1831–32, 577.
——, tartrate and racemate of, atomic weight of, 1839, 49.
—— in hydrochloric and nitric acids, Dr. S. Macadam on, 1854, 72.
——, on the action of hard waters upon, by Dr. W. L. Lindsay, 1858, 54.
Lead, notice of the discovery of, on the borders of Galloway and Ayrshire, 1840, 97.
——, H. L. Pattinson on the extraction of silver from, 1838, 50.
—— mines, Grassington, S. Eddy on the, 1844, 52.
—— mines of Yorkshire, on their produce in 1857, by R. Hunt, 1858, 181.
—— ore, new, of Caldbeck Fell, Cumberland, Prof. T. Thomson on, 1838, 46.
——, crystalline, artificial, 1837, 47.
Leaden pipe, corroded, on, 1835, 55.
—— pipes for water, action of atmospheric air, uncombined chlorine, and carbonic acid on, 1846, 42.
Leaves and petals, on the colours of, by W. E. C. Nourse, 1858, 115.
Leda obtusa, taken alive, 1846, 70.
—— pygmæa, taken in a living state, 1846, 69.
—— truncata, taken alive, 1846, 70.
Leech, medicinal, notice of the, 1854, 113.
Leeches, on the admixture of nervous and muscular fibres in the nerves of, by Prof. Redfern, 1859, 174.
Legumine, on the proportion of organic phosphorus in, by Prof. Voelcker, 1857, 60.
—— in beans, Prof. Liebig's experiments on the, 1841, 53.
Lemuridæ, Prof. Van der Hoeven on the anatomy of the, 1860, 135.
Lennard's microscopical drawings illustrating the structure of bone, notice of, 1848, 125.
Lens, crystalline, in fishes, birds, reptiles, and quadrupeds, Sir D. Brewster on the, 1831–32, 81.
——, crystalline, of the cuttle-fish, Sir D. Brewster on the, 1858, 10.
——, crystalline, of the ox, Sir D. Brewster on a new membrane investing the, 1850, 4.
——, crystalline, Sir D. Brewster on the polarizing structure in the, after death, 1836, 16.
——, crystalline, Sir D. Brewster on the cause of the optical phenomena in the, during the absorption of distilled water, 1837, 11.
——, photographic, new, by T. Sutton, 1859, 63.
——, polyzonal, A. Gordon on the, 1834, 595.
——, Prof. Petzval's, 1858, 13.
——, on a stereoscopic cosmoramic, by G. Knight, 1854, 70.
Lenses and mirrors of different sizes, Sir D. Brewster on the form of images produced by, 1852, 3.
——, crystalline, of animals, on certain abnormal structures in the, and in the human crystalline, by Sir D. Brewster, 1858, 7.
——, cylindrical, on a method of manufacturing, by Prof. Sturm, 1854, 47.
——, Sir D. Brewster's experiment on the diamond for, 1837, 13.

Lenses, diamond, topaz, and rock-crystal best suited for, by Sir D. Brewster, 1860, 8.
——, on a machine for polishing specula for, by Dr. R. Greene, 1856, 24.
——, on a new form of, and their application to the construction of two telescopes or microscopes of exactly equal optical power, by Sir D. Brewster, 1849, 6.
—— of the compound object-glasses of microscopes, on the centering of the, by Sir D. Brewster, 1857, 4.
Lepadidæ, R. Garner on the structure of the, 1860, 130.
Lepidoptera, effect of temperature and periodicity on the development of, by Dr. Verloren, 1860, 123.
——, Irish, list of additions to, by E. Birchall, 1857, 101.
Lepidopterous (micro-) larvæ, H. T. Stainton on some peculiar forms amongst the, 1860, 122.
—— parasite on the body of the firefly, J. O. Westwood on a, 1860, 124.
Lepidosiren, Dr. Melville on the, 1847, 78.
——, on two specimens of, from Macartney Island, 1841, 72.
Lepidotus, Prof. Owen on the teeth of, 1838, 142.
Lepisamidæ, on the homologies of the, by Prof. Dickie, 1855, 110.
Lepralia sinuosa, L. Barleei, L. cantharifformis, and L. umbonata, G. Busk on, 1859, 145, 146.
Leprosy, Dr. Hancock on, 1837, 128.
Leptocephalidæ, Prof. V. Carus on the, 1860, 125.
Leptocephalus vitreus, Prof. Kölliker on, 1855, 111.
Lepton squamosum, J. Alder on the animal of, 1847, 73.
Leslie's hygrometer with a new scale, H. H. Watson on the use of, 1834, 569.
Lesmahago and Douglas coal-field, J. Bryce on the, 1850, 77.
L'Estrange's (F.) curved drill catheter, notice of, 1835, 106.
Lestris, E. Backhouse on the annual appearance of some of the tribe on the Durham coast, 1838, 108.
Leucine and tyrosine in the pancreatic fluids and contents of the intestine, Prof. Kölliker on, 1855, 124.
Leveling stave, Prof. Willis on an improved, 1838, 154.
Levelings, barometrical, in the Madras Presidency, by General Cullen, with observations by Colonel Sykes, 1847, 42.
—— by the anéroid métallique from the Mediterranean Sea by Joppa to Samaria, through Jerusalem, by H. Poole, 1856, 44.
—— from Jerusalem through Hebron to the Dead Sea, compared with the level of the Mediterranean Sea at Joppa, by H. Poole, 1856, 44.
—— from Jerusalem to the Dead Sea by Nebi Mousa, by H. Poole, 1856, 44.
Levelings along the west shore of the Dead Sea, commencing at the south end from Usdum to Jericho, by H. Poole, 1856, 45.
—— from Jericho to Jerusalem, by H. Poole, 1856, 46.
—— by the anéroid métallique in the Lake district, Westmoreland, 1856, 46.
Levels of land and sea, statement of Committee for ascertaining the, 1837, 59.
—— taken in Jerusalem with the aneroid barometer, Capt. W. Allen on, 1854, 116.
Lias formation, Prof. Strickland on the genus Cardinia as characteristic of the, 1841, 65.
—— in the neighbourhood of Grantham, Rev. P. B. Brodie on the, 1850, 74, 76.
——, lower, in the south of England, Dr. T. Wright on the, 1860, 108.
——, lower, Prof. Buckman on the plants of the "insect limestone" of the, 1848, 66.
——, middle and upper, of the west of England, C. Moore on the, 1856, 70.
—— of Gloucestershire, Rev. P. B. Brodie on the discovery of insects in the lower beds of the, 1842, 58.
—— of Gloucestershire, Prof. Buckman on some remains of the fossil Sepia in the, 1848, 66.
—— of Gloucestershire, Worcestershire, and Warwickshire, on some new species of corals in the, by Rev. P. B. Brodie, 1856, 64.
——, Rev. P. B. Brodie on the stratigraphical position of certain species of corals in the, 1860, 73.
—— of Somersetshire, notice of Ichthyosaurus tenuirostris from the, 1831–32, 587.
—— rock, lower, on the evidence of a reef of, extending from Robin Hood's Bay to Flamborough Head, by Capt. Woodall, 1856, 80.
Liassic, triassic, oolitic, and Permian formations, E. Hull on the south-easterly attenuation of the, 1856, 67.
Lichen esculentus, of Algiers, 1849, 71.
Lichens, British, notice of some, yielding dye, 1853, 37.
——, colorific, J. Bedford on, 1858, 45.
——, Prof. Liebig on a white crystalline substance obtained from, 1841, 53.
——, on the genus Abrothallus, by Dr. W. L. Lindsay, 1856, 88.
Liebig's apparatus for the analysis of organic substances, Prof. Hess on a modification of, 1839, 57.
—— mineral theory, J. B. Lawes and Dr. J. H. Gilbert on agricultural chemistry in relation to, 1851, 45.
Life, human, on the forces concurring in the phenomena of, by Dr. W. Addison, 1847, 89.
—— assurance, on the mortality of the provident classes in this country and on the Continent, 1850, 151.
——, duration of, in the members of the several professions, 1846, 99.

Life table, on a mechanical process by which, commencing at birth, it may be converted into a similar table commencing at any other period of life, 1855, 163.
Life-boat, tubular or double, Richardson's, Col. Chesney on, 1853, 113.
——, improved, Dr. Paterson on an, 1840, 211.
Ligatures, W. Hetling on a new instrument for the removing of, 1836, 124.
Light, Rev. Prof. Powell on some points connected with the theory of, 1838, 6.
——, on a difficulty in the theory of, by Prof. Stokes, 1848, 5.
——, general view of an oscillatory theory of, by Prof. Rankine, 1853, 9.
——, Prof. Powell on certain points of the wave-theory of, 1841, 25.
——, apparatus for showing in projection on a screen all the phenomena of, 1854, 10.
——, on a portable apparatus for analysing, by M. Porro, 1859, 62.
——, Prof. Stokes on the aberration of, 1845, 9.
——, Rev. Prof. Challis on the aberration of, 1845, 9.
——, on its absorption by coloured media, by Sir J. F. W. Herschel, 1833, 373.
——, Rev. Dr. Whewell on the theory of its absorption by coloured media, 1834, 550.
——, Rev. Prof. Powell on Von Wrede's explanation of the absorption of, 1837, 16.
——, dispersion and absorption of, Rev. M. O'Brien on the, 1844, 8.
——, on the theory of its dispersion by the hypothesis of undulations, by Rev. Prof. Powell, 1834, 549.
——, Rev. Prof. Powell on the dispersion of, 1837, 18.
——, dispersion of, Rev. Prof. Powell on anomalies in the, 1847, 37.
——, on some discussions relative to the theory of the dispersion of, by Rev. Prof. Powell, 1849, 8.
——, Lord Brougham on the inflexion of, 1849, 7.
——, remarks by Rev. Prof. Powell on Lord Brougham's experiments on, 1851, 11.
——, on a phenomenon in the interference of, by R. Potter, jun., 1833, 378.
——, Rev. Prof. Powell on a new case of interference of, 1839, 1.
——, Rev. Prof. Powell on a new case of interference of, 1848, 3.
——, homogeneous, R. Potter, jun., on the modification of the interference of two pencils of, 1831–32, 555.
——, homogeneous, Sir D. Brewster on a new kind of polarity in, 1838, 13.
——, G. B. Airy on a new apparent polarity of, 1840, 3.
——, Sir D. Brewster on a new polarity of, 1845, 7.
Light, polarization of, by rough surfaces and white dispersing surfaces, Sir D. Brewster on the, 1844, 11.
——, polarization of, Sir D. Brewster on the use of amethyst plates in experiments on the, 1858, 13.
——, on a new theory of the polarization of, by Rev. Prof. Challis, 1847, 1.
——, elliptic polarization in, reflected from various substances, Rev. Prof. Powell on, 1843, 9, 10.
——, elliptic polarization of, Rev. Prof. Powell on certain points connected with the, 1844, 7.
——, Rev. Prof. Powell on the elliptic polarization of, by metallic reflexion, 1845, 6.
——, Rev. Prof. Powell on certain cases of elliptic polarization of, by reflexion, 1846, 3.
——, common and polarized, Sir D. Brewster on the action of crystallized surfaces upon, 1836, 13.
——, polarized, Sir D. Brewster on the rings of, in specimens of decomposed glass, 1840, 6.
——, polarized, Rev. Dr. Lloyd on the phenomena of thin plates in, 1841, 26.
——, polarized, reflected and transmitted by thin plates, Rev. Dr. Lloyd on the affections of, 1859, 14.
——, polarized, on a method of measuring the absorption of, in doubly refracting crystals, by M. Dove, 1854, 10.
——, on the discovery of minute quantities of soda by the action of polarized, by Dr. T. Andrews, 1852, 33.
——, Prof. J. D. Forbes on the use of mica in polarizing, 1839, 6.
——, elliptically-polarized, Rev. Prof. Powell on, 1842, 13.
——, elliptically-polarized, M. Dove on an apparatus for, 1854, 9.
——, Sir W. R. Hamilton on the propagation of, in crystals, 1838, 6.
—— in vacuo, Sir W. R. Hamilton on the propagation of, 1838, 2.
——, remarks by R. Potter on Fresnel's theory of the reflexion of, from the surfaces of bodies, 1831–32, 74.
——, reflected and refracted, Rev. Prof. Powell on Fresnel's formulæ for, 1856, 15.
——, on the power of glass of antimony to reflect, by R. Potter, jun., 1833, 377.
——, on the refraction of, beyond the critical angle, by Prof. Stokes, 1848, 5.
—— transmitted through certain colouring media, through the vapours of the atmosphere, and through red, orange, and yellow glasses, A. Claudet's observations upon, 1847, 35.
——, blue and yellow, on the theory of compound colours with reference to mixtures of, by Prof. J. C. Maxwell, 1856, 12.
——, theory of, and the production of colour, J. Smith on the, 1859, 22.

Light of different colours, on the unequal sensibility of the foramen centrale to, by Prof. J. C. Maxwell, 1856, 12.
——, on an instrument for exhibiting the colours of liquids by transmitted, 1852, 20.
——, on its influence on polarized electrodes, by W. R. Grove, 1858, 17.
—— from a low form of combustion, Dr. C. J. B. Williams on, 1834, 588.
——, artificial, Prof. Davy on a new gas for, 1836, 62.
——, Sir D. Brewster on a new property of, 1837, 12.
——, Sir D. Brewster on a new property of, exhibited in the action of chrysammate of potash upon common and polarized light, 1847, 7.
——, photochemical researches, with reference to the laws of the chemical action of, by Prof. Bunsen and Prof. Roscoe, 1855, 48.
——, on its influence in preventing chemical action, by R. Hunt, 1848, 54.
——, its action on plants, by Dr. Daubeny, 1833, 436.
——, R. Hunt on its influence on the growth of plants, 1843, 35.
——, its action on the germination of seeds, by Dr. Daubeny, 1855, 56.
——, effect of, as a part of vital statistics, 1843, 96.
——, R. Mallet on its chemical action in the decoloration of recent solutions of caustic potass, 1838, 61.
——, Sir D. Brewster on the action of two blue oils upon, 1843, 8.
——, Mr. Scanlan on the blackening of nitrate of silver by, 1838, 63.
——, R. Hunt on its influence on metallic and other compounds, 1843, 35.
——, on the action of the red, orange, and yellow rays upon iodized and bromo-iodized silver plates, by A. Claudet, 1848, 50.
——, electrical, Prof. Wheatstone on the prismatic decomposition of, 1835, 11.
——, electric, M. Serrin on an automatic regulator for, 1860, 19.
——, Sir D. Brewster on the geometric forms, and laws of illumination of the spaces which receive the solar rays, transmitted through quadrangular apertures, 1842, 15.
——, Sir D. Brewster on the combined action of grooved metallic and transparent surfaces upon, 1838, 13.
——, solar, analysis of, by Sir D. Brewster, 1831–32, 89.
——, solar, Dr. Daubeny on apparatus for obtaining a numerical estimate of the intensity of, 1839, 6.
—— of suns, meteors, and temporary stars, D. Vaughan on the, 1857, 42.
——, zodiacal, observations on, by E. J. Lowe, 1851, 24.
—— under water, W. S. Ward on an apparatus for giving, in diving operations, 1847, 132.
Light, heat, and motion, Prof. W. Thomson on mechanical antecedents of, 1854, 59.
——, heat, electricity, magnetism, and gravitation, J. Goodman on the identity of the existences or forces of, 1848, 53.
Lighthouse apparatus, revolving, W. Swan on the limits to the velocity of, 1850, 191.
Lighthouses, an economical light for, 1834, 595.
Lightia lemniscata, Sir R. Schomburgk on, 1844, 71.
Lightning, on the form of, by J. Nasmyth, 1856, 14.
——, report of a Committee on the effects produced by, on a tree near Edinburgh, by Prof. Phillips, 1850, 13.
——, notice of a tree struck by, in Clandeboye Park, by Sir D. Brewster, 1852, 2.
——, account of some extraordinary effects of, on the packet-ship 'New York,' by the Rev. Dr. Scoresby, 1831–32, 567.
——, Sir W. S. Harris on the protection afforded by metallic conductors against heavy strokes of, 1847, 23.
—— conductors, facts to illustrate the effect of, 1831–32, 568.
—— conductors, Prof. Faraday on, 1854, 158.
—— conductor for chimneys, J. Nasmyth on a, 1854, 158.
—— conductors, G. J. Symons on employing the gutters and rain-water pipes of private houses as, 1860, 52.
Lights, percussion, for preventing collisions at sea and on railways, by Capt. Leach, 1857, 181.
Lignin of wheat, W. C. Jones on nitrogen in the, 1836, 75.
Lignites of the Giant's Causeway and the Isle of Mull, Prof. Harkness on the, 1856, 66.
Limagne d'Auvergne, Sir R. I. Murchison on the tertiary lacustrine deposits of the, 1850, 96.
Limax, Rev. B. J. Clarke on the Irish species of the genus, 1843, 73.
—— Sowerbii, Prof. Allman on certain peculiarities in the anatomy of, 1846, 82.
—— variegatus, in the human intestines, Dr. D. Williams on, 1837, 98.
Lime, borate of, notice of some specimens of, 1854, 75.
——, carbonate of, G. Gladstone on a remarkable deposit of, about fossils in the lower lias of Dorsetshire, 1858, 51.
—— flowers, or peculiarly formed substances, from a reservoir, T. J. Pearsall on, 1853, 45.
——, phosphate of, bed in the Isle of Wight, Capt. Ibbetson on the position of the, 1848, 69.
——, rosolate of, on its formation on cotton fabrics in hot climates, by Prof. F. C. Calvert, 1859, 68.

Lime, soda, or potash, hypochlorites of, Dr. A. P. Price on determining the amount of available chlorine in, 1853, 48.
——, sulphate of, Chevalier Claussen on its effect upon vegetable substances, 1853, 38.
——, sulphate of, with water, Prof. Johnston on a new compound of, 1838, 59.
Limestone, Rev. Dr. Buckland on perforations in, 1842, 57.
——, Rev. Dr. Buckland on the agency of land snails in forming holes and trackways in, 1845, 48.
——, ought it to be employed in constructing quays, docks, &c.?, 1841, 67.
——, carboniferous, at Cefn in Denbighshire, J. E. Bowman on the bone-cave in, 1836, 88.
——, carboniferous, at Llysfaen and Penmaen Rhos, near Abergele, J. Price on the, 1854, 93.
——, carboniferous or mountain, of Ireland, Sir R. Griffith on the fossils of the, 1842, 51.
——, carboniferous, of Ireland, Sir R. Griffith on the, 1843, 42.
——, lower carboniferous, in the neighbourhood of Cork, Prof. Harkness on the jointing and dolomitization of the, 1857, 68.
——, freshwater, of Dr. Hibbert, D. Page on the, 1855, 91.
——, insect, of the lower lias, Prof. Buckman on the plants of the, 1848, 66.
——, magnesian, Prof. Johnston on the formation of, 1853, 42.
——, magnesian, formations, Dr. Daubeny on the causes of the irregularities of surface observable in, 1842, 39.
——, magnesian, formed by the alteration of an ordinary calcareous deposit, H. C. Sorby on, 1856, 77.
——, mountain, Rev. D. Williams on the discovery of the remains of fishes at the base of the, near Bristol, 1842, 60.
——, mountain, Prof. Harkness on the representatives of the, as they occur in Dumfriesshire, 1850, 84.
——, mountain, districts of the north of England, A. Hancock on certain vermiform fossils found in the, 1858, 80.
—— of Burdiehouse, Dr. Hibbert on the, 1834, 644.
—— of Closeburn, C. G. S. Menteath on the, 1834, 651.
——, Dr. Haines on some beds of, in the valley of Cork, 1843, 51.
——, Silurian, of Hay Head, Staffordshire, Prof. Buckman on the age of the, 1846, 61.
—— of Kirkton, near Bathgate, Dr. Hibbert on the, 1834, 643.
—— and May Hill sandstone of Norbury and Linley, Rev. Prof. Sedgwick on the, 1853, 58.
—— hills around Plymouth, W. Walker on the, 1841, 66.
Limestones and associated strata near Manchester, Prof. Phillips on the, 1836, 86.
—— and slates of South Devon, R. A. C. Austen on the organic remains of the, 1839, 69.
——, carboniferous, of the basin of Limerick, J. B. Jukes on the igneous rocks interstratified with the, 1860, 84.
——, magnesian, Mr. Richardson on the composition of, 1842, 37.
—— of Yorkshire, W. Lucas on the, 1844, 30.
——, on some of the mechanical structures of, by H. C. Sorby, 1855, 97.
Limnoria terebrans, wood of the Southampton Pier penetrated by, 1837, 100.
Limulus, W. H. Baily on the subgenus Bellinurus, with descriptions of two new species (B. regina and B. arcuatus), 1858, 77.
Linaria, Dr. Allman on a new species of, 1843, 78.
Lingula flags of North Wales, J. W. Salter on the fossils of the, 1852, 56.
Linseed oil, white lead destroys the colouring matter of, 1839, 61.
Liquid diffusion, Prof. T. Graham on, 1851, 47.
Liquids, Dr. Ure on the fluency or viscidity of, at the same and different temperatures, 1839, 22.
——, Mr. Beart on a method of filtering, 1839, 131.
——, on a method of computing the absolute volume of the ultimate particles of, by J. J. Waterston, 1854, 63.
——, on the relation between refractive index and volume among, by Rev. T. P. Dale and Dr. J. H. Gladstone, 1859, 12.
——, on a pan for evaporating, at a temperature below 180° Fahr., by R. Davis, 1859, 230.
——, R. W. Townsend on an instrument for exhibiting the colours of, by transmitted light, 1852, 20.
Liquors, alcoholic, on certain curious motions observable on the surfaces of, by Prof. J. Thomson, 1855, 16.
Litharge, Mr. Benson on white lead from, 1839, 60.
Lithian wire, prepared by Prof. Bunsen, notice of, 1855, 66.
Lithic acid, in the secretion of insects, W. Herapath on, 1836, 70.
Lithodendra, fossil, Dr. Jacob on, 1835, 59.
Lithographs by the photographic process, on a process for obtaining, by Prof. A. C. Ramsay, 1855, 69.
Lithotomy and lithotripsy, Mr. Wilson on, 1842, 87.
Lithotrity, Dr. Costello on cases of calculus treated by, 1839, 109.
Lithuanic, Germanic, and Slavonic populations, Dr. Latham on the original distribution of the, 1850, 141.

Littledale's apparatus for the blind, by which they can write and read, 1844, 99.
Lituites hibernicus, J. W. Salter on, 1852, 61.
Liver, A. Shaw on some peculiarities in the circulation of the, 1842, 79.
Liverpool docks, J. Grantham on a high-level railway for the, 1854, 151.
—— museum, on some specimens of shells from the, 1860, 116.
Livingstone expedition, extracts from a letter of Dr. Kirk relating to the, 1859, 183.
Loan funds in Ireland, H. J. Porter on the, 1841, 93; 1842, 98.
Locomotive differential pulley, investigation of the principle of the, by J. I. Hawkins, 1833, 424; 1835, 112.
—— engine, Mr. Hawthorn on an improved method of working the valves of a, 1838, 160.
—— engines on railways, G. Heaton on the cause and prevention of oscillation of, 1849, 116.
Locomotives, road, Earl of Caithness on, 1860, 204.
——, straight axles for, Prof. Vignoles on, 1842, 104.
Logarithms, mnemonical, Dr. Rootsey on, 1836, 38.
Logologues, Prof. Hamilton on a new theory of, 1835, 7.
Logwood, Prof. Erdmann on hæmatoxylin, the colouring principle of, 1842, 33.
London clay at Kyson, discovery of the remains of mammalia in the, 1839, 70.
—— clay, Prof. Agassiz on the fishes of the, 1846, 52.
—— clay, Rev. Prof. Henslow on detritus derived from the, and deposited in the red crag, 1847, 64.
Longevity, on literary and philosophical pursuits as conducive to, by Dr. Fowler, 1854, 114.
Longitude between Greenwich and New York, E. J. Dent on the determination of the difference of, by means of chronometers, 1839, 27.
—— between London and Edinburgh, Sir T. M. Brisbane on the difference of, 1838, 20.
——, observations on Prof. Loomis's remarks on, deduced from the method of moon-culminating stars, by Rev. Dr. T. R. Robinson, 1857, 27.
——, Prof. Loomis on a method of determining, by means of the electric telegraph, 1857, 25.
——, Sir Christopher Wren's cipher, containing three methods of finding the, Sir D. Brewster on, 1859, 34.
Lophius, or mud-fish, A. Murray on the, 1855, 115.
Lophopus crystallina, Prof. Allman on, 1849, 72.
Lotus or sacred bean of India, Dr. Buist on the, 1857, 96.
Lucernaria inauriculata, Prof. Owen on, 1849, 78.
Lucernariadæ, on the structure of the, by Prof. Allman, 1844, 66; 1859, 143.
Ludlow rock, upper, and base of the old red sandstone, Sir R. I. Murchison on the bone-beds of the, 1856, 70.
—— rocks, Sir R. I. Murchison on the fossil fishes of the, 1837, 91.
Luminiferous vibrations, on a method of determining whether they are parallel or perpendicular to the plane of polarization, by the Abbé Moigno, 1857, 9.
Luminosity of the sea on the Cornish coast, C. W. Peach on the, 1849, 80.
Luminous bands in the spectra of various flames, Sir D. Brewster on the, 1842, 15.
—— beams, Rev. Prof. Powell on a remarkable instance of, observed by G. A. Rowell, 1852, 11.
—— lines in certain flames corresponding to the defective lines in the sun's light, Sir D. Brewster on, 1842, 15.
Lunar craters, Geminus, Burckhardt, and Bernoulli, W. R. Birt on the mid-day illumination of the, 1859, 30.
—— volcanic craters, J. Nasmyth on the structure of, 1854, 91.
—— volcanos, T. W. Webb on, 1838, 93.
—— curves of minimum temperature at Greenwich and Utrecht, on the similarity of the, by J. P. Harrison, 1860, 44.
—— influence on temperature, by J. P. Harrison, 1858, 36.
—— meteorological cycle, L. Howard on a, 1845, 25.
—— and terrestrial motion, secular variations in, from the influence of tidal action, D. Vaughan on, 1857, 40.
—— observations made at Greenwich, G. B. Airy on the state of the reductions of the, 1844, 2.
—— rainbow, J. K. Watts on a, 1851, 41.
—— surface, J. Nasmyth on the structure of the, and its relation to that of the earth, 1850, 25.
—— surface, Prof. Phillips on micrometrical and photographic drawings of the, 1854, 25.
—— tables, new empirical, Sir J. W. Lubbock on, 1836, 12.
Lunars, Colonel Shortrede on calculating, 1859, 4.
Lungs, diseased, from sand respired, 1837, 108.
——, Dr. Barnes on abscess of the, 1838, 134.
——, Dr. Crawford on a case of anthracosis, 1838, 13.
——, Dr. De Vrij on the black colouring matter of the, 1849, 36.
——, Dr. W. Thomson on their infiltration with black matter, 1834, 683.

Lungs, gangrene of the, Dr. Popham on its treatment by chloride of lime, 1843, 82.
——, Mr. M'Gregor on carbonic acid thrown off from the, 1840, 87.
——, on the quantity of carbonic acid evolved from the, under the influence of various agents, by Dr. E. Smith, 1858, 142.
——, R. H. Brett on the physical and chemical characters of expectoration in diseases of the, 1837, 125.
Lycopodium, on the acid which is formed by the action of hydrate of potash upon, 1844, 33.
——, sporangia of, Prof. Balfour on the occurrence in coal of peculiar vegetable organisms resembling the, 1854, 97.
—— lepidophyllum, G. B. Sowerby on, 1838, 119.
Lyell's classification of tertiary deposits, E. Charlesworth on, 1836, 86.
Lying-in Hospital, Dublin, registry kept in the, 1835, 106.
Lymph, coagulable, Prof. A. Buchanan on its separation by filtration from liquid human blood, 1840, 75.
——, coagulable, Dr. Perry on the effusion of, 1840, 159.

Macadamized roads, on, 1857, 180.
M'Andrew's (R.) collection of mollusca made at the Azores, Prof. E. Forbes on, 1854, 108.
Macgillivraya, a new mollusk, Prof. E. Forbes on, 1851, 77.
Machærium subduoens, from Port Essington, Sir J. Richardson on, 1842, 69.
Machairodus neogæus, of South America, Prof. Owen on, 1846, 66.
Machilis maritima, Prof. Dickie on, 1855, 110.
Machine for washing, atmospheric, J. Fisher on an, 1860, 210.
Machine regulator, Mr. Rayners on a, 1840, 209.
Machinery, Rev. J. W. M'Gauley on the application of electro magnetism to, 1836, 24.
——, heavy, J. G. Bodmer on a new apparatus for starting, 1844, 98.
Machines, electro-magnetical, Prof. Jacobi on, 1840, 18.
——, reaping, A. Crosskill on, 1858, 209.
Maclurea, Prof. E. Forbes's notice of the new species of, 1851, 65.
Macrauchenia of South America, Prof. Owen on the, 1846, 66.
Macrocephali of Hippocrates, Dr. Minchin on the crania of the, 1857, 146.
Macropodidæ, Prof. Owen on the dentition of the, 1848, 91.
Madder, J. Higgin on the colouring matters of, 1848, 54.
Mæcenas, colossal bust of, presented by Dr. Manni to the Association, 1837, xliii.
Magnecrystallic action and diamagnetism, Prof. Tyndall on, 1851, 15.
Magnecrystallic action, §Prof. Tyndall on Poisson's theoretic anticipation of, 1852, 20.
Magnesia, Dr. Daubeny on its volatilization by heat, 1835, 51.
——, ammoniacal phosphate of, its precipitation, 1835, 54.
—— and platinum, and barytes and platinum, cyanurets of, Sir D. Brewster on the optical properties of the, 1850, 5.
——, on the action of the soap-test upon water containing a salt of, by Dugald Campbell, 1850, 49.
Magnesian family, Dr. L. Playfair on new oxides of metals of the, 1842, 35.
—— limestone, Prof. Johnston on the formation of, 1853, 42.
—— limestone formations, causes of irregularities of surface in, by Dr. Daubeny, 1842, 39.
—— limestones, Mr. Richardson on the, 1842, 37.
—— rocks, T. S. Hunt on, 1860, 83.
Magnesium, A. Connell on the atomic weight of, 1852, 36.
Magnet, on the diurnal motion of a, freely suspended in the direction of magnetic dip, by J. A. Broun, 1847, 20.
——, on the heat produced by the influence of the, upon bodies in motion, by L. Foucault, 1855, 11.
——, powerful temporary, notice of a, 1831-32, 85.
——, electro-, experiments with a large, by J. P. Joule, 1855, 12.
Magnet-electrometer, Lieut. Morrison's experiments on a, 1838, 74.
Magnets, artificial, by the process of M. Elias, Sir D. Brewster on, 1850, 4.
——, artificial, Rev. Dr. Scoresby on the circumstances which affect the energy of, 1843, 13.
——, improved, and modes of determining their powers, Rev. Dr. Scoresby on, 1842, 19.
——, bifilar and balance, J. A. Broun on the mechanical compensation of the, for variations of the magnet moment with temperature, 1850, 9.
——, J. Cunningham on a method of constructing, 1837, 38.
——, Rev. J. W. M'Gauley's experiments on, 1836, 25.
—— of various forms, Rev. J. W. M'Gauley on the relative lifting power of, 1835, 20.
——, permanent, having the greatest fixity and capacity conjointly secured, W. Petrie on the manufacture of, 1846, 33.
——, Rev. Dr. Lloyd on the best position of three, in reference to their mutual action, 1839, 12.
——, steel, on the making and magnetising of, by P. Cameron, 1855, 10.
——, vibrating, Sir W. S. Harris on the method of employing, in the investigation of

the magnetic intensity of the earth, 1831–32, 560.
Magnetic action of the compass in iron steamships, G. B. Airy on correcting the, 1838, 21.
—— action, new, Herr Plücker on experiments belonging to a, 1848, 2.
—— or diamagnetic bodies of any form, Prof. W. Thomson on the equilibrium of, under the influence of the terrestrial magnetic force, 1848, 8.
—— causation, G. Towler on, 1846, 33.
—— charts of declination, S. Beswick on a method for computing, 1850, 3.
—— condition, Rev. Dr. Scoresby on the mode of developing the, 1846, 35.
—— condition of matter, Prof. Faraday on the, 1847, 20.
—— curves, with applications to problems in the theories of heat, electricity, and fluid motion, Prof. W. Thomson on, 1853, 18.
—— declination, J. A. Broun on the diurnal variation of the, and the annual variation of magnetic force, 1849, 8.
—— declination, J. A. Broun on the diurnal variations of the, at the magnetic equator, and the decennial period, 1860, 21.
—— declination, J. A. Broun on the effect of height in the atmosphere on the diurnal variation of, 1850, 7.
—— declination, J. A. Broun on the mode in which the diurnal law of, varies from place to place, and the probable position and epoch of the line of least diurnal variation near the equinoxes, 1860, 20.
—— dip at Stockholm, Dr. Siljeström on the, 1858, 27.
—— dip and total force, J. Welsh on a sliding rule for converting the readings of the horizontal and vertical force magnetometers into variations of, 1851, 20.
—— disturbances, on the amount and frequency of the, and of the aurora at Point Barrow, on the shores of the Polar Sea, by General Sabine, 1857, 14.
—— disturbances, Rev. Dr. Lloyd on the periodicity of, 1845, 12.
—— elements, Rev. Dr. Lloyd on simultaneous changes of the, 1841, 26.
—— equator, J. A. Broun on the diurnal variations of the magnetic declination at the, 1860, 21.
—— field, on some peculiarities of the, by Prof. Tyndall, 1854, 16.
—— force, earth's, Rev. Dr. Lloyd on the regular variations of the direction and intensity of the, 1843, 12.
—— force, terrestrial, on the intensity of the, by J. Drummond, 1858, 24.
—— force, terrestrial, Rev. Dr. Lloyd on, 1836, 31.
—— forces of rods of different lengths, experiments upon the, by Prof. Jacobi, 1840, 21.
Magnetic and diamagnetic forces, on motions exhibited by metals under the influence of, by W. S. Ward, 1849, 46.
—— and electrical force, on the law of, by Sir W. S. Harris, 1856, 11.
—— induction dip-circle, new, J. A. Broun on a, 1860, 23.
—— induction in crystalline substances, Prof. W. Thomson on the theory of, 1850, 23.
—— instrument, new, by Rev. Dr. Scoresby, 1836, 28.
—— instrument to guard the eyes of grinders from fragments of steel, 1831–32, 60.
—— intensity instrument (Hansteen's), effect of three iron cylinders upon, 1851, 9.
—— intensity of the earth, on the method of employing vibrating magnets in the investigation of the, by Sir W. S. Harris, 1831–32, 560.
—— intensity, terrestrial, in relation to the influence of height, Prof. J. D. Forbes on, 1836, 30.
—— investigations, W. Petrie on the results of an extensive series of, 1846, 33.
—— iron ore, Prof. T. Andrews on a new variety of, 1852, 41.
—— lines, isoclinal, in Yorkshire, Prof. Phillips on, 1850, 14.
—— machine, large, Rev. Dr. Scoresby on a, 1845, 15.
—— manipulation, Rev. Dr. Scoresby on a new process of, and its effects on hard steel and cast iron, 1844, 12, 100.
—— needle, Sir John Ross on the deviation of the, peculiar to Liverpool, 1854, 12.
—— needle, W. H. Barlow on the existence of alternating diurnal currents of electricity at the terrestrial surface, and their connexion with the diurnal variation of the, 1847, 21.
—— needles and bars, Prof. Christie on their preservation from oxidation, 1841, 41.
—— observations, Rev. Dr. Lloyd on the mean results of, 1848, 1.
—— and meteorological observations at Sir T. M. Brisbane's observatory, Makerstoun, in 1842, J. A. Broun on the results of the, 1845, 15.
—— observations made at Sir T. M. Brisbane's observatory, J. A. Broun on some results of the, 1846, 32.
—— observations in Ireland, Rev. Dr. Lloyd's account of, 1834, 557.
—— observations at Trevandrum, results of, by J. A. Broun, 1858, 30.
—— observatory at Alten, on the establishment of a, 1847, 34.
—— and meteorologic observatory at Bombay, A. B. Orlebar on the, 1847, 28.
Magnetical observatory at Dublin, Rev. Dr. Lloyd's account of the, 1837, 20.
—— observatory of Munich, Dr. Lamont's account of the, 1840, 26.
——, meteorological, and astronomical ob-

servatory on the mountain of Angusta Mullay in Travancore, at 6200 feet above the level of the sea, J. A. Broun on the, 1855, 25.
Magnetical and meteorological observatory at Travancore, at 6200 feet above the level of the sea, successful establishment of the, by J. A. Broun, 1858, 30.
Magnetic phenomena in Yorkshire, Prof. Phillips on, 1853, 6.
—— phenomena, Rev. Dr. Scoresby on, 1831–32, 80.
—— pole, Rev. H. M. Grover on an orbital motion of the, round the north pole of the earth, 1849, 8.
—— rocks in South India, J. A. Broun on, 1860, 24.
—— survey of India, Messrs. Schlagintweit's general abstract of the results of, 1860, 32.
—— survey of the west coast of India, J. A. Broun on a, 1860, 27.
—— variation with certain peculiarities of the earth's structure, S. M. Saxby on the connexion of, 1845, 16.
Magnetism, Prof. Plücker on, 1853, 7.
——, Rev. J. W. M'Gauley on the nature of, 1835, 24.
——, on practical applications of, by R. Mallet, 1835, 18; by Rev. J. W. M'Gauley, 20.
——, J. Goodman on the theory of, 1842, 17.
—— as a moving power, Rev. J. W. M'Gauley on the application of, 1835, 20.
——, R. W. Fox on the absence of, in cast iron when in fusion, 1835, 33.
—— of iron ships, and its changes, Rev. Dr. Scoresby on the, 1855, 12.
—— of rotation in masses of crystallized bismuth, Prof. Matteucci on the, 1853, 6.
—— and diamagnetism, Prof. Matteucci on the laws of, 1852, 6.
—— and dynamical electricity, as two different forms of the same force, on, 1837, 28.
——, light, heat, electricity, and gravitation, on the identity of the existences or forces of, 1848, 53.
—— of the earth, the daily mean intensity of the, increases as a whole or diminishes as a whole, by J. A. Broun, 1860, 20.
——, terrestrial, Dr. Siljeström on those variations of the force and the direction of, which seem to depend on the aurora borealis, 1848, 4.
——, terrestrial, experiments on the intensity of, by Dr. Traill, 1831–32, 559.
——, terrestrial, J. Drummond on the development of a physical theory of, 1858, 25.
——, terrestrial, observations made to determine the variations of the laws of, with respect to height in the atmosphere, by J. A. Broun, 1847, 19.
——, terrestrial, Prof. Thomson on the electric currents by which the phenomena of, may be produced, 1847, 38.
Magnetism, terrestrial, W. Ettrick on an instrument for observing minute changes of, 1836, 33.
Magnetized brass, Rev. T. Rankin on, 1849, 29.
—— iron, on the electric qualities of, by Prof. W. Thomson, 1855, 19.
Magnetizing action of transitory electric currents, Prof. Marianini on the, 1842, 27.
Magneto-electricity and underground wires, E. B. Bright on, 1854, 8.
——, J. P. Joule on the calorific effects of, 1843, 33.
Magneto-electrometer, for the measurement of magneto-electric currents, by W. Whitehouse, 1856, 20.
Magnetographic instruments at Munich, Dr. Lamont's account of, 1847, 25.
Magnetometer, Scoresby's, 1836, 28.
——, declination, on the construction of silk suspension threads for the, by J. A. Broun, 1850, 10.
Magnetometers, horizontal and vertical force, J. Welsh on a sliding rule for converting the readings of, into variations of magnetic dip and total force, 1851, 20.
Magnitudes, mechanical, the parallelogram of, by H. Cox, 1851, 1.
Maize, forty days', on some changes in the male flowers of, by R. A. C. Austen, 1849, 68.
Malapterurus beninensis (an electric fish), A. Murray on, 1855, 114.
Mal d'Aleppe, Dr. Bell on the disease known by the name of, 1849, 161.
Mammal, anoplotherioid (Dichobune ovinum), from the upper eocene of Hordwell, Hants, Prof. Owen on an, 1856, 72.
——, fossil (Stereognathus ooliticus), from the Stonesfield slate, Prof. Owen on a, 1856, 73.
Mammalia, G. R. Waterhouse on the classification of the, 1843, 65.
——, Prof. Owen on the teeth of, 1838, 145.
——, Prof. Owen on the homologies and notation of the dental system in, 1848, 91.
——, J. Goodsir on the follicular stage of dentition in the, 1839, 82.
——, rare and interesting, Dr. J. E. Gray on some, 1837, 99.
—— in the crag and London clay of Suffolk, Sir C. Lyell on remains of, 1839, 69.
——, fossil, new, from the eocene freshwater formation at Hordwell, Hants, Prof. Owen on, 1851, 67.
——, fossil, of South America, Prof. Owen on some, 1846, 65.
——, triassic, C. Morse on remains of, in the drift, in the neighbourhood of Frome, 1860, 88.
Mammals of Devonshire, J. C. Bellamy on the, 1841, 68.
——, Dr. Macdonald on the erroneous division of the cervical and dorsal ver-

tebræ, and the connexion of the first rib with the seventh vertebra, and the normal position of the head of the rib in, 1848, 89.
Mammary glands in the Cetacea, Dr. A. Jacob on the, 1835, 86.
Mammiferous ovum, Dr. Barry on the first changes consequent on fecundation in the, 1840, 129.
Man, J. Crawfurd on the Aryan or Indo-Germanic theory of the races of, 1860, 154.
——: language no test of race, by Rev. G. C. Geldart, 1858, 150.
——, negro variety of, on the ethnological and physical characters of the, by A. d'Abbadie, 1857, 117.
——, on the effects of atmospheric pressure on the frame of, 1831–32, 85.
——, on the probable migrations and variations of the earlier families of, by Admiral FitzRoy, 1857, 130.
——, on the influences of instinct on his intellectual and moral powers, by Dr. Fowler, 1850, 130.
——, on the sensational, emotional, intellectual, and instinctive capacities of the lower animals, compared with those of, by Dr. Fowler, 1858, 134.
——, on the effects of commixture, locality, climate, and food on the races of, by J. Crawfurd, 1858, 149.
——, Prof. Forbes on the weight, height, and strength of, 1836, 38.
——, W. B. Brent on the stature and relative proportions of, at different epochs and in different countries, 1844, 82.
——, W. B. Brent on the height, weight, and strength of, 1845, 80.
——, Dr. Hodgkin on the dog as the associate of, 1844, 81.
—— and animals, on the Antrum pylori in, by Prof. Retzius, 1855, 132.
—— and mammals, on the Fornix cerebri in, by Prof. Retzius, 1855, 133.
Manatee, on the skull of a, from Old Calabar, by Dr. J. M'Bain, 1859, 150.
Manati, or cow-fish, of Guiana, 1836, 98.
Manatus senegalensis (sea cow), W. Oliphant on the skull of a, 1855, 116.
—— Vogelii, Prof. Owen on, 1856, 99.
Mandingo, a native of Nyáni-Marú, Western Africa, brief account of a, by Capt. Washington, 1838, 97.
Manganese, oxide of, Dr. A. P. Price on determining the commercial value of, 1853, 47.
——, oxides of, Dr. Will on an improved method of ascertaining the commercial value of, 1843, 37.
Mangrove tree, J. L. M'Leod on the, 1859, 191.
Manufactures, on the application of gutta percha to, 1848, 122.
Manufacturing and agricultural industry, J. P. Hennessy on, 1857, 162.
Manure, mineral, Prof. Liebig on, 1845, 39.
Manures, different, on their effects on the composition of the mixed herbage of meadow-land, by J. B. Lawes and Dr. J. H. Gilbert, 1859, 70.
——, W. C. Spooner on certain principles which obtain in the application of, 1846, 44.
Map of Lycia, Lieut. Spratt's, notice of, 1843, 64.
—— of the world, improved monographic projections of a, by J. Gall, 1855, 148.
—— of Derbyshire, E. Hall on a mineral, 1837, 91.
Maps, on the application of a decimal scale to the construction of, 1857, 145, 172.
——: on the geometrical projection of two-thirds of the surface of the sphere, by Col. Sir H. James, 1858, 151.
——, on the application of Col. Sir H. James's geometrical projection of two-thirds of the sphere to the construction of, 1859, 183.
——, contour, Capt. Larcom on, 1843, 18.
——, J. I. Hawkins on folding, for the pocket, 1839, 132.
——, geological, J. W. Salter on a system of colour for, 1847, 69.
——, Babinet's homolographical, notice of, 1854, 2.
——, Babinet's homolographical, Prof. Hennessy on, 1856, 112.
——, relief, A. Ravenstein on, 1840, 122.
——, topographical, Capt. Cybulz on some models to facilitate instruction in delineating the features of the ground on, 1860, 155.
—— of Sweden, Count De Rosen on, 1847 67.
Marchantia conica, Prof. Allman on, 1845, 71.
Marekanite, the mineral, 1842, 46.
Margaric acid, 1840, 76.
Marguérite's method for the estimation of iron, 1854, 74.
Marigold, R. Dowden on a luminous appearance on the, 1843, 79.
Marine animals, C. S. Bate on the boring of, 1849, 73.
—— life, on a new map of the geological distribution of, by Prof. E. Forbes, 1852, 73.
Marl of the Isle of Man, Prof. E. Forbes on the, 1840, 104.
——, chloritic, or phosphate of lime bed in the Isle of Wight, Capt. Ibbetson on the position of the, 1848, 69.
Marsh's test for arsenic, Dr. W. Odling on, 1859, 75.
Marshes and fen lands, on the application of steam power to the drainage of, by J. Glynn, 1848, 117.
Maraileaceæ, Dr. G. Lloyd's observations on the, 1836, 102.
Marsupiata, Prof. Owen on the, 1858, 105.
Mastodon Andium, Prof. Owen on the skull of the, from the post-pleiocene beds of the Pampas of Buenos Ayres, 1846, 66.

Mastodon angustidens, Dr. Vallini on a skeleton of the, found near Montopoli, 1852, 62.
Mathematical definitions, on Dr. Whewell's views respecting the nature and value of, by J. P. Hennessy, 1858, 3.
—— optics, Sir W. R. Hamilton on a view of, 1831–32, 545.
Mathematics: on the polyhedron of forces, by J. T. Graves, 1856, 1.
——: on the congruence $nx \equiv n+1 \pmod{p}$, by J. T. Graves, 1856, 1.
——: on a theorem in combinations, and on a particular class of congruences, by H. M. Jeffery, 1856, 3.
——: on the porism of the in-and-circumscribed triangle, by A. Cayley, 1855, 1.
——: on the possible and impossible cases of quadratic duplicate equalities in the Diophantine analysis, by M. Collins, 1855, 2.
——: on a more general theory of analytical geometry, including the Cartesian as a particular case, by A. J. Ellis, 1855, 5.
Matias bark, Dr. Mackay on, 1839, 61.
—— bark, Dr. Mackay on the chemical and medicinal properties of, 1840, 160.
Matter, on the absorption of, by the surfaces of bodies, by Sir D. Brewster, 1855, 9.
——, Dr. Laming on the constitution and forces of molecules of, 1846, 35.
——, Sir G. Gibbes on the constitution of, 1844, 41.
——, Prof. Faraday on the magnetic condition of, 1847, 20.
——, Rev. Dr. Whewell's remarks on Dr. Wollaston's argument respecting the infinite divisibility of, 1839, 26.
Mazatlan, on shells from, by P. P. Carpenter, 1854, 107.
Meadow-land, on the effects of different manures on the composition of the mixed herbage of, by J. B. Lawes and Dr. J. H. Gilbert, 1859, 70.
Measurement, angular, P. Adie on a new reflecting instrument for, 1860, 59.
Measures, on the diversity of, in the corn-markets of the United Kingdom, by J. T. Danson, 1856, 137.
——, weights, and coinage, English, on the use of prime numbers in, by J. Yates, 1857; 174.
——, weights, and money of this country, General Sir C. W. Pasley on simplifying and improving the, 1847, 43; 1856, 146.
——, metrical, of length, on the nomenclature of the, by G. J. Stoney, 1859, 244.
Measuring actual distances, P. Adie on an instrument for, 1860, 59.
—— bodies to a very minute degree of accuracy, Mr. Whitworth on an instrument for, 1844, 27.
Meat, fresh, results of experiments on the preservation of, 1854, 69.
—— dietary, salt-, on the use of phosphate of potash in a, by R. Galloway, 1855, 63.
Mechanical antecedents of motion, heat, and light, Prof. W. Thomson on the, 1854, 59.
—— energy of the universe, Prof. W. J. M. Rankine on the reconcentration of the, 1852, 12.
—— value of heat, J. P. Joule on the, 1843, 33.
—— equivalent of heat, as determined by the heat evolved by the agitation of liquids, J. P. Joule on the, 1845, 31; 1847, 55; 1848, 21.
—— force and temperature, J. J. Waterston on a law of mutual dependence between, 1853, 11.
—— magnitudes, H. Cox on the parallelogram of, 1851, 1.
—— notation, as exemplified in Scheütz's calculating machine, H. P. Babbage on, 1855, 203.
—— power, on the friction break dynamometer for the measurement of, by Prof. J. Thomson, 1855, 209.
—— process for cooling air in tropical climates, 1852, 128.
—— properties of heat, G. Rennie on the, 1856, 165; 1857, 190.
—— science, W. Fairbairn on the progress of, 1853, 116; 1858, 201.
—— strain, on the effects of, on the thermo-electric qualities of metals, 1855, 17.
Mechanics, Prof. Sylvester on the application of Poncelet's theorems for the linear representation of quadratic radicals, to practical questions of, 1860, 7.
——, analytical, Prof. Jacobi on a new general principle of, 1842, 2.
——, analytical, Prof. Braschmann on the principles of, 1842, 4.
Mechanism, on a new element of, by R. Roberts, 1848, 119.
Meconine and papaverine, on the constitution of, and their relations to the other constituents of opium, by Prof. T. Anderson, 1854, 64.
Medical charities of London, statistics of the, 1856, 127; of Paris, *ib.*
—— profession, Dr. Abercrombie on the importance of the study of mental philosophy to the, 1834, 670.
—— science, Dr. W. P. Alison on the application of statistics to questions in, 1855, 155.
Medicinal action of bromine and its compounds, Dr. Glover on the, 1840, 157.
—— properties of the Matias bark, Dr. Mackay on the, 1840, 160.
—— and chemical properties of carbonized peat moss, by J. W. Rogers, 1857, 58.
Medo-Persic philology, Prof. MacDouall on, 1852, 90.
Medulla oblongata, R. Garner on alterations in the, in cases of paralysis, 1860, 129.
—— oblongata, Dr. J. Reid on the anatomy of the, 1840, 154.
Meduse, R. Patterson on the, 1840, 142.

REESE LIBRARY OF THE UNIVERSITY OF CALIFORNIA.

Medusæ, on the habits of fish in relation to certain forms of, by C. W. Peach, 1853, 70.
——, British naked-eyed, with notices of seven undescribed forms, J. R. Greene on the, 1857, 103.
——, Pulmograde, of the British seas, Prof. E. Forbes on the, 1846, 84.
—— preserved in Goadby's solution, 1845, 65.
Medusoid structure in the reproductive gemmæ of the Tubularian and Sertularian polypes, Prof. Allman on the, 1852, 70.
Megatherioid quadruped (Scelidotherium leptocephalum) from La Plata, Prof. Owen on a, 1856, 73.
Megatherium, Prof. Owen on the structure of the tooth of the, 1838, 146.
——, Dr. W. Adam on some symmetrical relations of the bones of the, 1833, 437.
Melibœa ornata, J. Alder on, 1842, 69.
Melly's (Mr.) collection of insects, notice of, 1854, 110.
Membranipora cornigera, M. vulnerata, and M. minax, G. Busk on, 1859, 145.
—— pilosa, Rev. T. Hincks on a peculiar organ of the, 1852, 75.
Men, athletic, of Great Britain, comparison of, with Greek statues, 1851, 84.
Mendicancy, statistics of, by Sir J. P. Boileau, 1848, 105.
Menstruation in women, Dr. E. J. Tilt on the causes which advance or retard the, 1850, 135.
Mental functions, Dr. Fowler on the influences of instinct on the, 1850, 130.
—— functions, Dr. R. Fowler on the influence of the circulation of the blood on the, 1853, 66.
—— labour, E. Chadwick on the physiological as well as psychological limits to, 1860, 185.
—— philosophy, Dr. Abercrombie on the importance to the medical profession of the study of, 1834, 670.
Mercury, Prof. Oersted on the changes which it undergoes in glass vessels hermetically sealed, 1846, 37.
——, W. West on salts of, 1838, 72.
——, ammonio-iodide of, Rev. J. B. Reade on, 1857, 56.
——, binoxide of, with bicyanide, Prof. Johnston on a new compound of, 1838, 59.
——, electric light of, Dr. J. H. Gladstone on the chromatic properties of the, 1860, 13.
Meriones, on the species of, found in Nova Scotia, by J. W. Dawson, 1855, 110.
Mersey Iron-works, W. Clay on the large fly-wheel erected at the, 1854, 147.
Metal, new (Pelopium), contained in the Bavarian tantalite, 1846, 37.
Metals, alloys, and salts, Prof. F. C. Calvert on the expansion of, 1858, 46.
——, ammonio-iodides of, Rev. J. B. Reade on a method of forming, 1857, 55.
Metals and metallic combinations, Baron C. Wetterstedt on their preservation from oxidation, decomposition, and injury from marine deposits and incrustations, 1847, 60.
——, compounds of, on the time required for their decomposition, 1857, 61.
——, crystallization of, by voltaic action, Dr. G. Bird on the, 1837, 45.
——, Dr. T. Woods on the amount of heat produced by the combination of, with oxygen, 1852, 39.
——, W. Fairbairn on the mechanical properties of, as derived from repeated meltings, 1852, 125.
——, galvanization of, Prof. Schönbein on the, 1839, 34.
——, on producing true planes or surfaces on, by J. Whitworth, 1840, 192.
——, molten, on some phenomena in connexion with, by J. Nasmyth, 1857, 26.
—— of the alkaline earths, Dr. Matthiessen on the, 1855, 66.
—— obtained from the alkalies and alkaline earths, on the combustibility and other properties of the, by Dr. Matthiessen, 1858, 57.
——, on the effects of mechanical strain on the thermo-electric qualities of, by Prof. W. Thomson, 1855, 17.
——, on some organic compounds containing, by Prof. Frankland, 1855, 62.
——, on the extraction of, from the ore of platinum, by Prof. E. Frémy, 1855, 63.
——, T. Spencer on the deposition of, by voltaic action, 1839, 38.
—— under the influence of magnetic and diamagnetic forces, W. S. Ward on motions exhibited by, 1849, 46.
Metallic and other compounds, R. Hunt on the influence of light on, 1843, 35.
—— reflexion, Prof. Stokes on, 1850, 19.
—— substances, Rev. Prof. Powell on elliptic polarization in light reflected from, 1843, 9.
Metalliferous deposits, on the polarity of cleavage-planes, their conducting-power, and their influence on, by E. Hopkins, 1848, 69.
—— veins, Prof. Reich's researches on electrical currents on, 1839, 34.
—— veins of Cornwall, Sir H. T. De la Beche on phenomena connected with the, 1836, 83.
—— veins of Tyndrum, notice respecting the, 1840, 97.
Metamorphic rocks, on the microscopic structure of certain, and the occurrence of metallic iron in them, 1852, 34.
—— and palæozoic rocks of Scotland, on the subdivisions of the, by D. Page, 1855, 92.
—— and older palæozoic rocks in Scotland, D. Page on the relations of the, 1858, 105.
—— and Silurian rocks of the south of Norway, D. Forbes on the relations of the, 1855, 82.

Meteor seen in India, notice of a, by Admiral Sir C. Malcolm, 1849, 24.
Meteors, Rev. Dr. Robinson on, 1848, 37.
——, Rev. Prof. Challis on a new instrument for observing the apparent positions of, 1848, 13.
——, &c., D. Vaughan on the light of, 1857, 42.
——, luminous, Rev. Prof. Powell on, 1847, 14.
——, periodic, Rev. Prof. Powell on, 1847, 15.
——, phosphoric, Rev. T. Rankin on, 1847, 18.
Meteoric astronomy, researches in, by D. Vaughan, 1854, 26.
—— iron found in the United States, Dr. Shepard's observations on, 1839, 54.
—— iron, on a large mass of, in Yale College, U.S., 1839, 56.
—— iron of Atacama, G. A. Bollaert on the, 1851, 84.
Meteorolites and asteroids, R. P. Greg on, 1854, 19.
Meteorological Committee, proceedings of the, 1837, 37.
—— cycle, lunar, L. Howard on a, 1845, 25.
—— instruments, Dr. J. Lee on photographic drawings of, 1854, 47.
—— investigations, Col. Sykes on balloon ascents for, 1858, 39.
—— observations, Rev. Dr. H. Lloyd on the mean resu'ts of, 1848, 1.
—— observations, Prof. Wheatstone on a new instrument for, 1842, 9.
—— observations made at sea, published by the Board of Trade, notice of, 1857, 28.
—— observations at Aden, 1846, 26.
—— observations at Alten in West Finmark, 1846, 12.
—— observations continued at Alten in Finmark, with observations on them, by Dr. J. Lee, 1848, 32.
—— observations made at Kaafjord, Finmark, and at Christiania, Norway, 1849, 18.
—— observations made at Kaafjord, Finmark, and at Christiania, Norway, Dr. J. Lee on, 1850, 36.
—— observations at Christiania, 1845, 19; 1846, 12; 1847, 33.
—— observations at Alten and Christiania, 1851, 33.
—— observations in Bavaria, Dr. Lamont on the system of, 1840, 27.
—— observations at Futtegurh, Bengal, by C. J. Pyle, with notes by Dr. Buist and Col. Sykes, 1851, 39.
—— observations at Fort George barracks, Bombay, 1846, 26.
—— observations made at Great Malvern, 1839, 14.
—— observations made at Huggate, Yorkshire, 1845, 18; 1847, 18; 1848, 36; 1849, 29; 1856, 47; 1858, 38; 1859, 52.
Meteorological and other observations made in India and Egypt, by Dr. J. D. Hooker, 1848, 17.
—— observations at Kew, F. Ronalds on the, 1846, 10.
—— observations at Sir T. M. Brisbane's observatory, Makerstoun, in 1842, J. A. Broun on the results of, 1845, 15.
—— observations at St. Helier, Jersey, 1846, 13.
—— observations at Stonyhurst, results of, 1860, 56.
—— observations made at Trevandrum, Mr. Caldecott on, 1840, 28.
—— and magnetical observatory at Travancore, at 6200 feet above the level of the sea, 1858, 30.
—— phenomena in the Ghâts of Western India, 1839, 15.
—— phenomena observed in India, by Dr. Buist, 1849, 15.
—— phenomena at Huggate, Rev. T. Rankin on, 1850, 42; 1857, 37.
—— phenomena observed at Swansea, by J. Jenkins, 1848, 23.
—— phenomena, Prof. Wartmann on some, 1846, 11.
—— phenomena, unusual, E. J. Lowe on some, 1851, 33.
—— phenomena of the equinoctial week, M. Du Boulay on the, 1860, 39.
—— research, J. Ball on rendering the electric telegraph subservient to, 1848, 12.
—— Society, British, notice of its formation and objects, 1850, 42.
—— summary for 1851, at Huggate, 1852, 31.
Meteorology of Huggate, 1854, 34.
—— of Hull, W. Lawton on the, 1853, 27.
—— of Ireland, Rev. Dr. Lloyd on the, 1852, 26.
—— of Nice, Col. Sykes on the, 1854, 34.
—— of Perth, Dr. Anderson on the, 1840, 56.
—— of North America, plan adopted by the Smithsonian Institution for investigating the, 1852, 26.
—— of the Albion mines, Nova Scotia, Col. Sykes on the, 1854, 35.
—— of the United States and Canada, R. Russell on the, 1855, 42.
——, on some problems of, by the Abbé Raillard, 1857, 35.
——, Prof. Hennessy on the principles of, 1860, 44.
——, Prof. Stevelly's attempt to connect the best-known phenomena of, with established physical principles, 1834, 564.
——, some remarks on, by Col. Reid, 1851, 39.
Meteoroscope, description of the, by Rev. Prof. Challis, 1848, 13.
Meter, water-, J. Parkinson on a, 1849, 125.
——, water-, pressure, W. Gorman on a, 1855, 207.

Methyle, on the physiological properties of, 1854, 76.
Metra, H. Mackworth on the, 1855, 207.
Metropolitan Society's dwellings for the poor, in St. Pancras, statistical account of the, by Col. Sykes, 1849, 108.
Mica, Prof. J. D. Forbes on its use in polarizing light, 1839, 6.
——, crystals of tourmaline, titanium, and quartz within, 1853, 3.
——, on the existence of Acari in, by Sir D. Brewster, 1855, 9.
Mica-schist, on the microscopical structure of, by H. C. Sorby, 1856, 78.
—— and gneiss, J. B. Jukes on the alteration of clay-slate and gritstone into, by the granite of Wicklow, 1856, 68.
Mica-slates and granite of Killiney Hill, Dublin, G. V. Du Noyer on the junction of the, 1857, 84.
Microlepidopterous larvæ, H. T. Stainton on some peculiar forms among the, 1860, 122.
Micrometer, ocular crystal, N. Pogson on the, 1858, 19.
Micrometric measurement, on the importance of introducing a new and uniform standard of, by Prof. Lyons, 1857, 115.
Microscope, achromatic, A. Pritchard's, 1835, 112.
——, C. Brooke on a new mode of illuminating opake objects under the highest powers of the, 1851, 7.
——, C. Brooke on a new arrangement for facilitating the dissection and drawing of objects placed under the, 1851, 7.
——, compound, method of applying it to the sides or top of aquaria less than two feet in height, 1857, 106.
——, compound, on the application of photography to the, by Prof. Wyville Thomson, 1850, 126.
—— for measuring the refractive power of minute bodies, A. Bryson on a, 1840, 87.
——, new form of, Sir D. Brewster on a, 1860, 8.
——, Newton's reflecting, description of R. Potter's new construction of, 1831–32, 71.
——, oxyhydrogen, J. T. Goddard on its use in exhibiting the phenomena of polarization, 1839, 8.
——, polarizing, Sir D. Brewster on an improvement in the, 1840, 10.
Microscopes, notice of several, 1858, 143.
——, on the centering of the lenses of the compound object-glasses of, by Sir D. Brewster, 1857, 4.
Microscopic objects, Dr. W. B Carpenter on photography applied to, 1847, 48.
—— objects in fluid, C. Brooke on an easy method of making thin glass cells for mounting, 1854, 47.
—— objects in natural history, Dr. Lankester on photographic plates and illustrations of, 1853, 70.
Microscopic objects, Sir D. Brewster on a method of illuminating, 1840, 9.
—— structure of certain basaltic and metamorphic rocks, Prof. T. Andrews on the, 1852, 34.
Microscopical discoveries, Prof. Ehrenberg's notice of, 1838, 116.
Microtherium, Prof. Owen on the genus, 1856, 72.
Middlesex Sessions, on the degree of education of persons tried at the, by Dr. J. Bateman, 1858, 168.
Middletonite, Prof. Johnston on, 1838, 60.
Migration of birds, Dr. C. Collingwood on the, 1858, 121.
Mildew and rust, produced by the same fungus, 1841, 73.
Milk, Dr. G. Wilson on the presence of fluorine in, 1850, 67.
——, human, G. D. Gibb on living animalcules in, 1860, 131.
——, new process of preserving, 1859, 74.
——, on the preservation of, 1854, 74.
—— of the cow-tree, 1837, 58.
Millstone-grit of North Staffordshire, as a substitute for flint for use in earthenware manufacture, 1839, 77.
Mind and vitality, Dr. Fowler on the correlation of, with the physical forces, 1851, 83.
——, on the state of the, during sleep, by Dr. R. Fowler, 1852, 80.
Mineral (Nemalite), analysis of the American, by Prof. Connell, 1846, 39.
——, a new, Prof. Connell on sulphatochloride of copper, 1847, 49.
—— basin of South Wales, on the great anticlinal line of the, by W. P. Struvé, 1848, 75.
—— bodies, on an instrument for distinguishing, 1831–32, 72.
—— charcoal, Prof. Harkness on, 1854, 86.
—— map of Derbyshire, E. Hall on a, 1837, 91.
—— produce of Yorkshire, R. Hunt on the, 1858, 181.
—— productions of Great Britain and the rest of Europe, comparative value of the, 1836, 144.
—— species, Sir D. Brewster on the value of optical characters in the discrimination of, 1834, 575.
—— springs of Yorkshire, W. West on the, 1844, 105.
—— substances in a molten state, on some phenomena in connexion with, by J. Nasmyth, 1857, 26.
—— substances employed as pigments, on the composition of two, by Dr. T. H. Rowney, 1855, 70.
—— substances, Rev. W. V. Harcourt on the effects of long-continued heat on, 1834, 576.
—— veins and the non-metalliferous joints in rocks, Prof. Phillips on the relations of, 1834, 654.

Mineral veins, influence of electrical currents in arranging the materials of, 1837, 46.
—— veins of Cornwall, on the, 1831–32, 586.
—— waters, Dr. E. Lankester on the existence of organic beings in, 1841, 72.
—— waters, on the salts present in, by Dr. J. H. Gladstone, 1856, 51.
—— waters, W. West on the presence of nitrogen in, 1849, 47.
Minerals from the south of Norway, on the occurrence and chemical composition of, by D. Forbes, 1854, 67.
——, highly hydrated, Dr. Lyon Playfair on the condensation of volume in, 1850, 60.
——, on determining the temperature and pressure at which they were formed, by H. C. Sorby, 1858, 107.
——, on some peculiarities in their arrangement in igneous rocks, by H. C. Sorby, 1858, 107.
——, Prof. Miller on their unequal expansion in different directions by heat, 1837, 43.
——, rocks, &c., Profs. W. B. Rogers and R. E. Rogers on the decomposition and partial solution of, by pure water and water charged with carbonic acid, 1849, 40.
——, siliceous, J. Jeffreys on the solvent power of water at high temperatures on, 1840, 125.
—— in the neighbourhood of Glasgow, Prof. T. Thomson on the, 1840, 64.
—— of Cork, R. W. Townsend on the, 1843, 38.
Mineralogical and Geological Museum of the Imperial Mining Department of Vienna, Prof. Haidinger on the, 1842, 39.
—— phenomena, form for tabulating, by S. Highley, 1856, 172.
—— specimens, Dr. Tamnau on rare, 1843, 38.
Mineralogy, on the progress of the science of, 1831–32, 60; 1834, 571.
Miner's axe, description of an ancient, discovered in the Forest of Dean, 1856, 71.
Miners, on a safety-cage for, by R. Aytoun, 1859, 228.
Mine-ventilator, W. P. Struvé's description of a, 1848, 120.
Mines, ancient, Rev. Dr. Hincks on, 1852, 110.
—— and mining industry of Belgium, R. Valpy on the, 1846, 100.
——, apparatus for raising miners and minerals from the deep vertical shafts of, 1843, 100.
——, Count Breuner on the use of wire ropes in, 1838, 150.
——, Dr. Arnott on safety lights for, 1837, 54, 131.
——, notice of a machine intended to prevent accidents in, 1854, 150.
——, on the depths of, by J. Taylor, 1833, 427.
Mines, on the ventilation of, by W. P. Struvé, 1848, 120.
——, on ventilating, 1849, 111, 125.
——, coal, on a direct-action steam-fan for the more perfect ventilation of, 1851, 116.
——, Prof. E. Hodgkinson on the temperature of the earth in, 1839, 19.
Minie rifle, remarks on the, by W. Fairbairn, 1852, 125.
Mining industry in France, G. R. Porter on the progress of, 1838, 174; 1844, 86.
—— records, T. Sopwith on the importance of preserving, 1838, 156.
—— records, and their preservation, Prof. Ansted on, 1844, 42.
Mirage, extraordinary, Dr. D. P. Thomson on an, 1847, 39.
——, Rev. C. F. Lyon on some phenomena of, 1850, 42.
——, Sir D. Brewster on a remarkable case of, 1852, 24.
—— on the sea-coast of Lancashire, notices of, by T. Hopkins, 1849, 16.
Mirrors, J. Nasmyth on the bending of silvered plate glass into, 1839, 7.
——, Sir D. Brewster on the form of images produced by, 1852, 3.
Mitchelstown caves, notes of a visit to, 1857, 108.
Moa, or great bird of New Zealand, Dr. Dieffenbach on the, 1845, 50.
Modelling, G. Busk on the employment of gutta percha for, 1847, 81.
Models, geographical, W. Bald on the construction of, 1840, 126.
——, geological, on, 1838, 94.
Mole, on the teeth of the, by Prof. Owen, 1838, 147.
Molecular action, Prof. Tyndall on, 1852, 20.
—— elaboration in organized bodies, Prof. J. H. Bennett on the law of, 1855, 119.
—— vortices, Prof. Rankine on the results of the hypothesis of, 1851, 3.
Molecules of bodies, on representing by diagrams the principal functions of the, by Rev. Dr. Macvicar, 1855, 66.
—— of matter, Dr. Laming on the constitution and forces of the, 1846, 35.
——, organic, and their relations to each other and to the medium of light, Rev. Dr. Macvicar on, 1859, 72.
Mollusca, ascidian, J. Goodsir and Prof. E. Forbes on Pelonaia, a new genus of, 1840. 137.
——, British, Prof. E. Forbes on the addition of the Nucleobranchia to the, 1843, 72.
——, British, with descriptions of new species, by J. Alder and A. Hancock, 1847, 73.
——, lamellibranchiate, British, Prof. E. Forbes on the families of, 1847, 75.
——, lamellibranchiate, J. Alder and A. Hancock on the branchial currents of Pholas and Mya, 1851, 74.
——, naked, J. Alder and A. Hancock on

some new and rare British species of, 1846, 83.
Mollusca nudibranchiata, J. Alder and A. Hancock on some new species of, 1843, 73.
——, nudibranchiate, Prof. Allman on a new genus of, 1844, 65.
—— nudibranchiata, J. Alder and A. Hancock on Dendronotus, a new genus of, 1845, 65.
——, nudibranchiate, J. Alder and A. Hancock on a new species (Thecacera virescens), and on a new genus and species (Oithona, and O. nobilis), 1851, 74.
——, nudibranchiate, Prof. Collingwood on the respiration of the, 1860, 113.
——, pulmoniferous, British, W. Thomson on the dentition of the, 1850, 126.
——, Prof. E. Forbes on the distribution of the, 1838, 112.
——, land, L. Reeve on the geographical distribution of the, 1851, 82.
——, new, notice of, by Prof. E. Forbes, 1837, 102.
——, J. Alder on three new species of, 1842, 69.
——, species obtained by dredging, 1842, 70, 72, 74.
——, J. Alder on a new species of, found at Dalkey Island, near Dublin, 1843, 74.
——, living species of, hitherto known only as fossils, notice of, by Prof. E. Forbes, 1846, 69.
——, Col. Portlock on sounds emitted by, 1848, 80.
——, T. L. Taylor on the sounds emitted by, 1848, 82.
——, Dr. Gray on the angular lines on the shells of, 1838, 111.
—— of Aberdeenshire, Dr. Dickie on the, 1859, 147.
—— of the Azores and St. Helena, Prof. E. Forbes on the, 1851, 76.
—— of the Azores, Prof. E. Forbes on the, 1854, 108.
—— obtained near Sana Island, the Mull of Galloway, and Oban, 1842, 70, 72, 74.
——, land and freshwater, found near Nottingham, E. J. Lowe on the, 1851, 80.
—— of the Mersey and Dee, 1860, 113.
—— of Orkney and Shetland, Prof. E. Forbes and J. Goodsir on the. 1839, 79.
——, land, of the Isle of Wight, W. Thompson on the, 1846, 83.
——, rare, collected in Zetland, 1849, 78.
Mollusk, on the Aspergillum or watering-pot, 1860, 120.
——, gasteropodous, Prof. E. Forbes on a new genus of, 1851, 77.
Molluska, gasteropodous, J. G. Jeffreys on the recent species of Odostomia, 1848, 79.
——, L. Reeve on the dissimilarity in the calcifying functions of, 1846, 82.
Molten substances, on some phenomena in connexion with, by J. Nasmyth, 1857, 26.
Monetary laws, on the distinctions between money and capital, interest and discount, currency and circulating medium to be observed in the reform of our, by H. Stansfeld, 1858, 197.
Money, measures, and weights, General Sir C. W. Pasley on simplifying and improving, 1847, 43.
Mongols, Mohammedan and Buddhist, of India, H. Schlagintweit on, 1857, 152.
Monimia Whiteana, a new crustacean, notice of, 1856, 91.
Monomyaria, on the families of, adopted by Prof. E. Forbes and Mr. Hanley, 1847, 76.
Monster, human, K. Mackay on a double monocephalic, 1840, 163.
Monstrosities, Dr. A. Wood on the laws regulating the development of, 1850, 138.
Monstrosity in the wallflower, Prof. Allman on a singular, 1851, 70.
—— of Lathyrus odoratus, Dr. Lankester on a, 1851, 72.
Montrose suspension bridge, J. M. Rendel on the, 1841, 102.
Monts de piété of Rome, Paris, and other cities on the continent, H. J. Porter on the, 1841, 91; in Ireland, H. J. Porter on the, 1842, 98.
Moon, Damoiseau's and Plana's works on the theory of the, 1836, 12.
——, on transit observations of the, by Rev. Dr. T. R. Robinson, 1857, 27.
——: on the variation in the quantity of rain due to its position in reference to the plane of the earth's orbit, by C. Fulbrook, 1857, 29.
——: secular variations in lunar and terrestrial motion from the influence of tidal action, by D. Vaughan, 1857, 40.
——, Prof. Stevelly on the projection of a star on the dark limb of the, 1845, 5.
——, Rev. Prof. Powell on the apparent projection of a star on the, 1846, 5.
——, Rev. Dr. Robinson on the visibility of the, in total eclipses, 1834, 552.
——, Rev. T. Rankin on a singular appearance of the shaded part of the, 1847, 18.
——, J. Grooby on the atmosphere of the, 1847, 8.
——, Sir J. Herschel on the climate of the, 1845, 5.
——, on the chronology of the formations of the, by Prof. Nichol, 1855, 28.
——, T. W. Webb on volcanos of the, 1838, 93.
——, on the structure of the surface of, and its relation to that of the earth, by J. Nasmyth, 1850, 25.
——, J. Nasmyth on the structure of volcanic craters of the, 1854, 91.
——: on the mid-day illumination of the craters Geminus, Burckhardt, and Bernoulli, by W. R. Birt, 1859, 30.
——, W. R. Birt on the forms of certain craters in the, 1860, 34.
——, on drawings of the, by J. Nasmyth, 1853, 14.

Moon, on photographs of the, by Prof. Phillips, 1853, 14.
——, on micrometrical and photographic drawings of the surface of the, by Prof. Phillips, 1854, 25.
——, on photographs of the, by Rev. J. B. Reade, 1854, 10.
——, Dr. Edwards on collodion photographs of the surface of the, 1854, 66.
——, Sir J. Herschel on a model of the, in relief, by Madame Witte, 1845, 4.
——, H. Blunt on a model of the surface of the, 1849, 1.
——, notice of the engraving of three views of the Mare Crisium of the, by C. P. Smyth, 1857, 28.
Moon's first quarter, R. Edmonds on remarkable thermometrical maxima at or near the, 1850, 32.
—— motion, on the state and history of the question respecting the acceleration of the, by G. B. Airy, 1859, 29.
—— orbit, Dr. Forbes on the mean apsidal angle of the, 1840, 1.
—— place, Sir J. W. Lubbock on new empirical tables for finding, 1836, 12.
—— rays, on the effect of the, 1852, 36.
Moon blindness, Sir G. Robinson on, 1858, 19.
Mooring ships in revolving gales, Col. Reid on, 1851, 36.
Moors of Morocco, a mixed race, E. Schlagintweit on the, 1860, 177.
Moraines, ancient, in Switzerland and Piedmont, 1850, 90.
'Morbus coxæ senilis,' Dublin Committee on a case of, 1836, 124.
Mordants, iron and alumina, on the action of gallic and tannic acids on, by Prof. F. C. Calvert, 1854, 65.
——, on the ageing of, in calico-printing, by Walter Crum, 1859, 258.
Morphia and its salts, Dr. Mohr on a new method of preparing, 1840, 78.
Morphological analogy between the disposition of the branches of exogenous plants and the venation of their leaves, by Rev. Prof. M'Cosh, 1852, 66.
—— changes observed in Trifolium repens, R. A. C. Austen on the, 1849, 68.
Morphology, animal, Prof. V. Carus on the value of development in, 1860, 125.
——, vegetable, M. T. Masters on, 1859, 136.
——, Dr. Lankester on some vegetable monstrosities illustrating the laws of, 1848, 85.
—— of pines and firs, Rev. Prof. M'Cosh on the, 1854, 99.
—— of the fruit in the Cruciferæ, Prof. Allman on the, as illustrated by a monstrosity in the wallflower, 1851, 70.
—— of the muscular system, M. Zaglas on the, 1850, 138.
—— of the reproductive system of Sertularian zoophytes, Prof. E. Forbes on the, 1844, 68.
Mortality, on the physiological law of, and on certain deviations from it, by Prof. Buchanan, 1855, 160.
Mortality, on the progressive rates of, as occurring in all ages, and on certain deviations, by J. Reid, 1855, 186.
—— of the provident classes in this country and on the continent, F. G. P. Neison on the, 1850, 151.
Mortar, marine, for destroying ships, J. Nasmyth on a, 1854, 158.
Mortars, 36-inch, R. Mallet on the construction of, 1857, 186.
Moskito grammar and vocabulary, Dr. Latham on the, 1847, 123.
Mososaurus, E. Charlesworth on its occurrence in the Essex chalk, and on the discovery of flint within the pulp-cavities of its teeth, 1845, 60.
Motella cimbria (rare British fish) of Linnæus, 1838, 109.
Motion, science of, J. S. S. Glennie on physics as a branch of the, 1860, 56.
—— and equilibrium, W. Spottiswoode on the fundamental laws of, 1847, 5.
——, heat, and light, on mechanical antecedents of, by Prof. W. Thomson, 1854, 59.
—— of points or atoms, J. K. Smythies on the, 1839, 24.
Moulding-machine, sheet-metal, R. Roberts on the, 1849, 126.
Mountain chains, Professor Rogers on the physical structure of the Appalachian chain as exemplifying the laws which have regulated the elevation of, 1842, 40.
—— chains in Savoy, A. Favre on the peculiar structure of the, 1860, 78.
—— countries, J. Ball on a plan for systematic observations of temperature in, 1860, 37.
—— ranges, Rev. J. Dingle on the corrugation of strata in the vicinity of, 1860, 77.
Mountainous districts, Sir J. Robison on a barometrical instrument for travellers in, 1838, 37.
Mountains, T. Hopkins on their influence on temperature in the winter in the northern hemisphere, 1841, 28.
—— of the Moon, Dr. Beke on the sources of the Nile in the, 1848, 63.
Mouse, on the flow of the lacteal fluid in the mesentery of the, by J. Lister, 1857, 114.
Mucous membrane, gastro-intestinal, Prof. A. Thomson on the structure of the, 1840, 149.
Mud deposited by the tidal waters of the Severn, Usk, and Avon, J. Ham on the, 1837, 76.
Mud-slide in the island of Malta, extensive, W. Milward on an, 1848, 70.
Mummies, Peruvian, description of two, by Dr. Bellamy, 1841, 75.
Murexide, on a new process for preparing, by Prof. Liebig, 1840, 74.
Muriatic acid, Prof. Geoghegan on a method

of testing its presence in hydrocyanic acid, 1835, 45.
Muriatic acid, Prof. Barker on its separation from peroxide of iron, 1835, 52.
—— acid, Dr. R. D. Thomson on its existence in the stomach during digestion, 1839, 58.
Murichi, or Ita palm, of Guiana, Sir R. Schomburgk on the, 1845, 71.
Muscæ volitantes, Sir D. Brewster on the phenomena and cause of, 1840, 8.
—— volitantes, T. Nunneley on, 1858, 141.
Muscat, Imaum of, on the possessions of the, 1852, 113.
Muscle, rectus abdominis, Sir D. J. H. Dixon on cases of laceration of the, 1837, 124.
Muscles, Dr. E. du Bois-Reymond on a new effect produced on, by the electric current, 1852, 78.
——, on the mode of action of galvanic stimuli directly applied to the, by Prof. Remak, 1855, 131.
—— of the extremities of birds, Prof. Sundevall on the, 1855, 137.
—— and nerves, Dr. Madden on the connexion between the, 1837, 106.
Muscular contractility and the nervous system, Dr. J. Reid on the connexion between, 1840, 155.
—— sense, a demonstration of the, by G. H. Lewes, 1859, 167.
—— system, M. Zaglas on the morphology of the, 1850, 138.
Museum, Ordnance Geological, Prof. Phillips's notice of the, 1843, 61.
——, Mineralogical and Geological, of the Imperial Mining Department of Vienna, Prof. Haidinger on the, 1842, 39.
Museums, on the preparation of fishes for, 1839, 82, 84.
——, local, W. Sharp on the formation of, 1839, 65.
Mushet band of ironstone of the coal-field of Scotland, R. Bald on the, 1846, 62.
Music, Grecian, Dr. S. Rootsey on, 1836, 37.
Musk-ox (Bubalus moschatus), fossil, additional evidence of the, from the Wiltshire drift, by Prof. Owen, 1856, 72.
Muslin, on the salts for rendering it non-inflammable, 1859, 86.
—— (embroidered) manufacture of Scotland and Ireland, on the rise, progress, and value of the, by Dr. Strang, 1857, 167.
—— manufacture (sewed) in Ireland, on the progress of the, 1852, 118.
Myadæ, J. Alder and A. Hancock on the branchial currents of the, 1851, 74.
Myliobatis, Prof. Owen on the teeth of the, 1838, 138.
Myliobatus, J. Couch on the egg-purse and embryo of a species of, 1846, 80.
Myology, comparative, M. Zaglas on, 1850, 138.
Myriapoda, J. F. Brandt on the, 1840, 137.
Myrmecophilous insects, Dr. J. A. Power on 1858, 129.
Mytilus crenatus, on the naturalization in England of, 1833, 448.

Naphtha, on a fluid obtained in manufacturing it, by M. Scanlan, 1835, 40.
——, on the action of nitric acid on, by Drs. Smith and Leigh, 1844, 33.
——, coal, Dr. Leigh on a new product obtained from, 1842, 39.
——, coal, on some of the basic constituents of, by C. G. Williams, 1855, 74.
Napier's rods, Mr. Hawkins on Cossham's improvement of, 1836, 132.
Nasmyth's steam-hammer for pile-driving Dr. R. Greene on, 1845, 92.
Natatores, J. Hogg on the classification of the, 1846, 78.
National accounts, on the mode of keeping and stating the, by C. Jellicoe, 1854, 138.
—— strength, as tested by the numbers, ages, and industrial qualifications of the people, Dr. J. Yeats on, 1855, 199.
Natural history as a branch of education, R. Patterson on, 1841, 77.
—— history: on the variation of species, by Rev. L. Jenyns, 1856, 101.
—— history, A. Goadby on Fizeau's process of etching, and its application to objects of, 1845, 76.
—— history, &c., G. Busk on the use of gutta percha for moulds for casts of objects in, 1847, 92.
"Natural History of Deeside and Braemar," by the late Dr. Macgillivray, edited by Dr. Lankester, notice of, 1855, 118.
Nature, on the disguises of, by A. Murray, 1859, 175.
Nautilus Inglisii, a new species, from the Halifax coal beds, 1847, 64.
—— (paper and pearly), on the shells of, 1846, 82.
—— Pompilius, Prof. Van der Hoeven on the structure of, 1847, 77.
—— subsulcatus, found in the older strata of Devonshire. 1840, 103.
Naval architecture, J. Owen on, 1833, 430.
—— architecture in Great Britain, G. Harvey on, 1831–32, 607, 608.
—— architecture, British, H. Chatfield on, 1836, 129.
—— architecture: R. Rawson on the oscillations of floating bodies, 1849. 5.
—— architecture: on the wave principle in the construction of steam-vessels, 1849, 30.
—— architecture and steam navigation, J. S. Russell on the progress of, with notice of the large ship of the Eastern Steam Navigation Company, 1854, 160.
Navigation: on the compasses in iron ships, 1854, 49, 53, 55.
—— of iron ships, on the principles and measures on which safety may be reason-

ably looked for in the, by Rev. Dr. Scoresby, 1854, 161.
Navigation: on the magnetism of iron ships and its changes, by Rev. Dr. Scoresby, 1855, 12.
——: on the variation in the rates of chronometers, by J. Hartnup, 1854, 20.
——, inland, suggestions relative to, by Prof. Hennessy, 1860, 211.
——, steam, in rivers, J. S. Russell on, 1837, 130.
——, steam, in America, Rev. Dr. Scoresby on, 1844, 97.
——, steam, on the progress of, 1854, 160.
Neara, a new genus of British shells, Dr. Gray on, 1838, 110.
Nebalia, Dr. Baird on the genus, 1847, 74.
Nebula 25 Herschel, Earl of Rosse on the, 1845, 4.
Nebulæ, drawings to illustrate recent observations on, by the Earl of Rosse, with remarks by Rev. Dr. Robinson, 1852, 22.
—— and stars at the Cape of Good Hope, Sir J. F. W. Herschel on, 1838, 17.
Needle, dipping-, on a peculiar source of error in experiments with, 1833, 412.
Needle-pointing, on, 1831–32, 59.
Needles, Prof. Matteucci on the electrization of, in different media, 1846, 46.
Negretti and Zambra's new maximum thermometer, 1855, 24.
Negro races of the Indian Archipelago and Pacific islands, W. J. Crawfurd on the, 1851, 86.
—— variety of mankind, on the ethnological and physical characters of the, 1857, 117.
—— women, J. Roberton on the period of puberty in, 1842, 82.
Nekrasowzers of Bessarabia, on the, 1846, 115.
Nemadactylus, a new genus of marine fish, from Van Diemen's Land, Sir J. Richardson on, 1841, 71.
Nemalite (an American mineral), Prof. Connell on the analysis of, 1846, 39.
Nematophora (thread-bearers), Prof. Huxley on the, 1851, 78.
Neottia gemmipara of Smith, Rev. W. Hincks on two living specimens of the, 1843, 78.
Nephelescope, an instrument to measure the expansion of air, 1840, 31.
Nephelogene, notice of a, 1859, 74.
Nereis tubicola, from the coast of Scotland, 1843, 76.
Nerve, glosso-pharyngeal, Dr. M. Hall and S. D. Broughton on the sensibility of the, 1836, 125.
——, glosso-pharyngeal, Dr. Reid on the, 1837, 109.
——, pneumogastric, or 'par vagum,' Dr. J. Reid on the, 1837, 110.
——, spinal accessory, Dr. J. Reid on the, 1837, 112.
Nerve-physiology, on the necessity of a reform in, by G. H. Lewes, 1859, 166.
Nerves, fifth pair of, Dr. N. Fowler on the functions of the, 1840, 156.
——, eighth pair of, Dr. J. Reid on the functions of the, 1838, 124.
——, Dr. Macartney on finding with exactness the position of the, 1839, 102.
——, Dr. A. Waller on their structure in the glands at the inferior surface of the tongue, 1848, 83.
——, on the value of the origins of, as a homological character, by Prof. Owen, 1848, 93.
——, cerebral, Dr. M. Hall and S. D. Broughton on the sensibilities of the, 1834, 676.
——, sensory and motory, on the supposed distinction between, by G. H. Lewes, 1859, 168.
—— and muscles, Dr. Madden on the connexion between, 1837, 106.
—— of the Hirudo medicinalis and other leeches, on the admixture of nervous and muscular fibres in the, by Dr. P. Redfern, 1859, 174.
Nervous disorders, Dr. Newbiggin on the effect of Croton oil in, 1840, 156.
—— system, Sir C. Bell on the proper method of studying the, 1834, 667.
—— system and the irritability of muscles in living animals, Dr. J. Reid on the connexion between the, 1834, 671.
—— system and muscular contractility, Dr. J. Reid on the connexion between the, 1840, 155.
—— system, Dr. J. Reid on the functions of the, 1836, 119.
—— system, Dr. Macartney on the structure and functions of the, 1833, 449.
—— system, on an abnormal condition of the, by Dr. W. Camps, 1855, 121.
—— system, on the action of alcohol on the, by Dr. W. Marcet, 1859, 170.
—— system and anatomy of the Bryozoa, Prof. Allman on the, 1849, 71.
Nesodon imbricatus and N. Sulivani, new species of fossil mammalia from South America, Prof. Owen on, 1846, 66.
Nest of the black redstart, Dr. M. Barry on a singular locality of a, 1852, 71.
Neuralgia, some remarks on, by Sir J. Murray, 1839, 106.
——, Dr. Newbiggin on the influence of Croton oil in, 1840, 156.
Neuralgic disease, T. M. Greenhow on the beneficial effects of mercurial action in, 1838, 124.
Newcastle coal-field, J. Buddle on the, 1838, 74.
Newspapers of various countries, statistics of, by P. L. Simmonds, 1855, 188.
Newtonian wave-lengths, 1859, 20.
Newton's (Sir Isaac) reflecting microscope, R. Potter's new construction of, 1831–32, 71.
—— theory of the colours of natural bodies, Sir D. Brewster on, 1831–32, 547.
—— rings, on, 1831–32, 556.

Newton's rings, an expression for the intensity of the central spot of, by Prof. Stokes, 1848, 5.
—— rings, Prof. Stokes on the perfect blackness of the centre of, 1848, 7.
—— rings, on the mode of disappearance of, in passing the angle of total internal reflexion, by Prof. Stokes, 1850, 19.
New Zealanders, Dr. Martin on the moral and intellectual character of the, 1845, 78.
Niagara cataract, remarks on the, 1844, 45.
Nicol's prism, a new polarizer resulting from a modification of, 1857, 5.
Nicotin and some of its combinations, Prof. E. Davy on, 1835, 38.
Niger and Tchadda rivers, on the expedition up the, by Dr. Baikie, 1855, 146.
Nile, Dr. Beke on the sources of the, in the Mountains of the Moon, 1848, 63.
Nitrate of lead, precipitated from water by nitric acid, 1835, 54.
—— with oxalate of lead, Prof. Johnston on a new compound of, 1837, 52.
—— of potassa, its action on the animal economy, 1838, 129.
—— of silver, Mr. Scanlan on the blackening of, by light, 1838, 63.
—— of silver as a caustic and therapeutic agent, Dr. R. D. Thomson on, 1838, 132.
Nitrates in plants, on a process for the determination of the, by Prof. Sullivan, 1857, 58.
Nitric acid, Dr. Daubeny on Cavendish's experiment respecting the production of, 1846, 38.
—— acid, J. Stein on a process for the estimation of, 1850, 62.
—— acid, on a new method for the quantitative estimation of, by Dr. Pugh, 1858, 64.
—— acid, precipitation of nitrate of lead from water by, 1835, 54.
—— acid, Prof. Penny on its action on the chlorates, iodates, and bromates of potassa and soda, 1840, 79.
—— acid, on its action on naphtha, by Drs. Smith and Leigh, 1844, 33.
—— acid, Dr. G. Bird on the products obtained by its action on alcohol, 1838, 55.
—— acid and alcohol, Dr. T. Thomson on the specific heats of, 1837, 43
—— and acetic acids, on a method of analysis applicable to the quantitative estimation of, by Dr. J. H. Gladstone, 1854, 68.
—— and hydrochloric acids, Dr. S. Macadam on the presence of lead in, 1854, 72.
—— acid and ammonia in rain-water, J. B. Lawes and Dr. J. H. Gilbert on the amounts of, and method of estimating, 1854, 70, 164.
Nitrogen, Rev. T. Exley on the specific gravity of, 1838, 64.
——, Dr. Voelcker on the percentage of, as an index to the nutritive value of food, 1850, 64.
——, assimilation of, by plants, J. B. Lawes, Dr. J. H. Gilbert, and Mr. Pugh on the, 1857, 51.
Nitrogen, on the annual yield of, per acre, in different crops, by J. B. Lawes and Dr. J. H. Gilbert, 1858, 52.
—— in lignin, W. C. Jones on, 1836, 74.
—— in mineral waters, W. West on, 1849, 47.
—— in organic analysis, Prof. Bunsen on a new mode of estimating, 1840, 77.
—— in organic bodies, Dr. Will and Dr. Varrentrapp's method for determining the amount of, 1841, 53.
——, chloride of, A. Gages on, 1857, 47.
Nitroglycerine, Prof. De Vrij on, 1851, 52.
——, Dr. J. H. Gladstone on, 1856, 52.
—— and other xyloids, Dr. J. B. Edwards on, 1858, 47.
Noctiluca miliaris, Dr. J. H. Pring on the, 1849, 81.
Nomenclature for organic bodies, systematic, G. C. Foster on a, 1857, 45.
——, zoological, on, 1844, 78.
—— and classification of the older palæozoic rocks of Britain, Rev. Prof. Sedgwick on the, 1853, 54.
Norantia, or Ascium of Guiana, notice of a new species of, 1836, 104.
Northern hemisphere, T. Hopkins on the influence of mountains on temperature in the, 1841, 28.
Notation, mechanical, H. P. Babbage on, 1855, 202.
Notodelphys, Prof. Allman on the development of, 1847, 74.
Notonecta, on the method of production of sound by a species of, by Prof. Redfern, 1859, 173.
Notonectidæ, R. Ball on noises produced by one of the, 1845, 64.
Nucleobranchia, Prof. E. Forbes on the addition of the order, to the British molluscous fauna, 1843, 72.
Nucula Packeri, 1847, 72.
—— Schomburgkii, 1847, 72.
Nudibranchia, J. Alder on new species of, 1842, 69.
Nudibranchiate mollusca, J. Alder and A. Hancock on a new species, and new genus and species of, 1851, 74.
Number, on some properties of a series of the powers of the same, by J. P. Hennessy, 1858, 4.
Numbers, J. T. Graves on the theory of, 1856, 1.
——, prime and composite, on the double square representation of, by Prof. Sylvester, 1844, 2.
Numerical notation, T. W. Hill on a system of, 1845, 4.
Nux vomica, on a method of extracting strychnia and brucia from, without alcohol, by J. Horsley, 1856, 54.
Nymphæaceæ, on the arrangement of the air-canals in the, by M. T. Masters, 1854, 102.

Oaks of Spain, Capt. Widdrington on the, 1847, 88.
Oats, J. P. Norton on the ashes of, 1845, 35.
Object-glass, double, on the achromatism of a, by Prof. Stokes, 1855, 14.
Object-glasses, achromatic, D. Dick on, 1834, 593.
——, compound, of microscopes, Sir D. Brewster on the centring of the lenses of the, 1857, 4.
——, on the focus of, by A. Claudet, 1859, 61.
Observatory, Edinburgh, Prof. Piazzi Smyth on a new form of equatorial mounting for the, 1850, 187.
—— at Glasgow, Prof. Nichol on the, 1842, 12.
——, Royal, Greenwich, G. B. Airy on the pivots and construction of the large transit-circle for the, 1850, 169.
——, Kew, F. Ronalds on observations and experiments at the, 1847, 30.
——, Kew, J. Welsh on the graduation of standard thermometers at the, 1853, 34.
——, Travancore, J. A. Broun on results of observations in the, 1860, 20.
——, portable, Rev. Dr. Lloyd on the arrangement of the, adopted by Capt. J. Ross, 1839, 14.
—— at Alten in Lapland, magnetical and electro-meteorological, Dr. J. Lee on the advantages to be derived from the establishment of a, 1847, 34.
——, magnetical, of Munich, Dr. Lamont's account of the, 1840, 26.
——, magnetical and meteorological, at Bombay, A. B. Orlebar on the, 1847, 28.
——, magnetical, meteorological, and astronomical, on the mountain of Angusta Mullay, in Travancore, at 6200 feet above the sea, J. A. Broun on the, 1855, 25.
——, meteorological and magnetical, at Travancore, on the successful establishment of a, by Col. Sykes, 1858, 30.
Observatories, magnetical, Rev. Dr. Lloyd on the best position of the magnets in, in reference to their mutual action, 1839, 12.
—— of Russia and of Greenwich, Prof. Struve on the importance of accurately connecting the, 1847, 46.
——, W. S. Jacob on a folding dome for, 1850, 180.
Occultation, Rev. Prof. Chevallier on a graphical method of computing, 1847, 7.
Ocean, on the probable maximum depth of the, by S. V. Wood, jun., 1855, 81, 99.
—— currents, A. G. Findlay on, 1853, 76.
Oceans, Northern and North Atlantic, Rev. Dr. Scoresby on the surface temperature and great currents of the, 1853, 18.
Odontograph, Prof. Willis on the, 1838, 154.
Odontophorinæ, or partridges, of America, J. Gould on the, 1844, 61.
Odostomia, a genus of gasteropodous mollusks, J. G. Jeffreys on the recent species of, 1848, 79.
Œnanthe crocata, Dr. Pickells on the deleterious effects of, 1843, 81.
Oïdium Tuckeri, or grape disease, Dr. A. P. Price on pentasulphate of calcium as a means of preventing and destroying the, 1853, 46.
Oil of assafœtida, Prof. Tilley and Dr. Maclagan on the, 1845, 33.
——, bone-, Dr. T. Anderson on the products of, 1851, 43.
——, Croton, Dr. Newbiggin on its effect in nervous disorders, 1840, 156.
——, dugong, J. S. Brazier on, 1859, 256.
——, new, for lubricating machinery, J. J. Hawkins on a, 1843, 99.
—— of Spiræa ulmaria, Dr. Ettling on, 1840, 78.
—— test, J. Nasmyth on an, 1849, 124.
Oils obtained from Matias bark, Dr. Mackay on, 1839, 61.
——, blue, Sir D. Brewster on their action upon light, 1843, 8.
Oiseaux, projet d'observations annuelles sur la périodicité des, 1841, 73.
Oithona, a new genus of nudibranchiate mollusca, J. Alder and A. Hancock's description of, 1851, 74.
Omentum, Mr. Dick on the use of the, 1834, 683.
Oolite of the neighbourhood of Stamford, Capt. Ibbetson and Prof. Morris on the, 1847, 128.
——, on the basement beds of the, by Prof. J. Buckman, 1856, 64.
——, inferior, on the occurrence of upper lias Ammonites in the (so-called) basement beds of the, by Dr. T. Wright, 1856, 80.
——, inferior, near Stroud, on a new species of Pollicipes in the, by Rev. P. B. Brodie, 1856, 64.
——, great, inferior oolite, and lias in the neighbourhood of Grantham, Rev. P. B. Brodie on the, 1850, 74.
——, great, at Stonesfield, Oxfordshire, E. Hull on the thickness of the formations below the, 1860, 81.
——, middle, of the neighbourhood of Cambridge, Rev. Prof. Sedgwick on the, 1845, 43.
Oolites, lower, of Oxfordshire, J. F. Whiteaves on the invertebrate fauna of the, 1860, 104.
Oolitic or Jurassic series in Russia, Sir R. I. Murchison on the, 1840, 108.
—— and carboniferous systems in Yorkshire, Prof. Phillips on the peculiar character of the, 1831–32, 56.
—— formations on the Great Western Railway, at the west end of Sapperton tunnel, Capt. Ibbetson on sections of the, 1846, 61.
——, liassic, triassic, and Permian formations, E. Hull on the south-easterly attenuation of the, 1856, 67.
Opal, on the cause of the colours in, by Sir D. Brewster, 1844, 9.

Ophiocaryon paradoxa (the snake-nut tree), Sir R. Schomburgk on the, 1844, 71.
Ophthalmia, purulent, Dr. Kennedy on, 1835, 105.
Opianyle, a product of decomposition of narcotine, 1854, 64.
Opium, Dr. T. Thomson on its value as a remedy in rheumatism, 1841, 78.
——, on the relation of meconine and papaverine to the other constituents of, by Prof. T. Anderson, 1854, 64.
Opossum, great dog-headed, Prof. Owen on the, 1841, 70.
Optical characters, Sir D. Brewster on their value in the discrimination of mineral species, 1834, 575.
—— elasticity in oblique prismatical crystals, Prof. Miller on the positions of the axes of, 1834, 556.
—— illusions of spectral phenomena, apparatus for exhibiting, by H. Dircks, 1858, 14.
—— illusions connected with the inversion of perspective, Sir D. Brewster on, 1860, 7.
—— instrument, new, Sir J. Robison on a, 1842, 27.
—— phenomena, R. Potter on an instrument for photometry by comparison, and on some applications of it to, 1831–32, 556.
—— phenomena in the crystalline lens during the absorption of distilled water, Sir D. Brewster on the cause of, 1837, 11.
—— phenomenon, singular, seen at sunset, Prof. Christie's account of a, 1837, 15.
—— phenomena observed at Mont Blanc by M. De la Rive, 1837, 10; Sir J. W. Lubbock's explanation of it, 31.
—— phenomena, Rev. Prof. Powell on some 1839, 1.
—— phenomena: Rev. S. Earnshaw on the rings which surround the image of a star formed by the object-glass of a telescope, 1845, 10.
—— phenomenon observed by the Rev. W. Selwyn, Sir D. Brewster on the cause of an, 1844, 8.
—— properties of Cadmacetite, W. Haidinger on the, 1855, 11.
—— properties of Chabasie, Prof. Johnston on the, 1835, 44.
—— properties of phosphorus, Dr. J. H. Gladstone and Rev. T. P. Dale on the, 1858, 15.
—— properties of the cyanurets of platinum and magnesia, and of barytes and platinum, Sir D. Brewster on the, 1850, 5.
—— properties of a recently discovered salt of quinine, Prof. G. G. Stokes on the, 1852, 15.
Optics, Sir W. R. Hamilton on a characteristic function in, 1833, 360.
——, Sir D. Brewster on the form of images produced by lenses and mirrors of different sizes, 1852, 3.
Optics, mathematical, Sir W. R. Hamilton on a view of, 1831–32, 545.
Orang-utan, on the teeth of the, 1838, 148.
Orbitolites complanatus, on the structure and development of, by Dr. W. B. Carpenter, 1855, 107.
Ordnance, on improvements in, by Capt. Blakely, 1857, 179.
Ordnance Geological Museum, Prof. Phillips's notice of the, 1843, 61.
—— survey of Templemore, C. Babbage on the statistics in the, 1835, 118.
—— survey, Prof. W. N. Hancock on the use to be made of the, in the registration of judgments and deeds in Ireland, 1849, 93.
Ores, hæmatite, of North Lancashire and West Cumberland, Prof. Phillips and R. Baker, jun. on the, 1858, 106.
Organ machinery, J. A. Forster on improvements in, 1853, 117.
Organs, on the application of mechanical power to the bellows of, by D. Joy, 1858, 213.
Organic analysis, Prof. Bunsen on a new mode of estimating nitrogen in, 1840, 77.
—— analysis, Dr. Percy on a gas-furnace for, 1846, 49.
—— bases, Dr. T. Anderson on the action of oxidizing agents on certain, 1850, 47.
—— bodies, method for determining the amount of nitrogen in, 1841, 53.
—— bodies, Dr. De Vrij on the analyses of the inorganic constituents of, 1847, 59.
—— bodies, on a more systematic nomenclature for, by G. C. Foster, 1857, 45.
—— chemistry, Dr. Kemp on a natural system of, 1845, 31.
—— colours, Dr. G. Wilson on the influence of sunlight over the action of the dry gases on, 1850, 65.
—— compounds, R. Rigg on the ultimate analysis of, 1837, 50.
—— compounds containing metals, Prof. Frankland on some, 1855, 62.
—— compounds, on a method of determining sulphur and phosphorus in, by Prof. Voelcker, 1855, 73.
—— life, minute forms of, in the rocks of Barbados, Sir R. H. Schomburgk on, 1847, 72.
—— matter in water, Prof. Forchhammer on a method of ascertaining the quantity of, 1849, 37.
—— nature, on the genetic cycle in, by Dr. Ogilvie, 1859, 172.
—— remains, Rev. Dr. Young on the antiquity of, 1838, 95.
—— remains of saurians and sauroid fishes from the new red sandstone of Warwickshire, 1839, 73.
—— remains of the limestones and slates of South Devon, 1839, 69.
—— remains of the Warwick sandstone, 1839, 75.
—— remains, fossil, of the south-east coast of Cornwall, and of Bodmin and Menheniott, C. W. Peach on the, 1841, 61.

Organic remains in a raised beach, in the limestone cliff under the Hoe at Plymouth, Dr. Moore on the discovery of, 1841, 62.
—— remains of Dura Den, 1850, 70.
—— remains in the Dorsetshire Purbecks, Prof. E. Forbes on the distribution of, 1850, 79.
—— remains of the frontier chain of Scotland, 1850, 107.
—— remains in the triassic beds near Frome, C. Moore on the, 1858, 93.
—— remains of the coal strata of North Staffordshire, R. Garner and W. Molyneux on the, 1859, 103.
—— remains, A. Gages on some transformations of iron pyrites in connexion with, 1860, 79.
—— substances, Rev. W. V. Harcourt on the effects of long-continued heat on, 1834, 576.
—— substances, Prof. Hess on apparatus for the analysis of, 1839, 57.
—— substances, Rev. T. Exley on the elementary constitution of, 1839, 58.
Organization, Dr. Macdonald on the unity of, as exhibited in the skeleton of animals, 1845, 62.
Organized bodies, on the law of molecular elaboration in, by Prof. J. H. Bennett, 1855, 119.
Oriental words adopted in English, J. Crawfurd on the, 1849, 84.
Ornithichnites, Mr. Hopkins on traces resembling, 1845, 52.
Ornithorhynchus, Prof. Owen on the os humero-capsulare of the, 1848, 79.
Orobanchaceæ, Dr. Lindley on the structure and affinities of the, 1837, 101.
Orthochronograph, for ascertaining the time at any place, on the, 1844, 14.
Oscillatoriæ, on the movements of, by Prof. G. B. Knowles, 1856, 88.
Osmerus hebridicus, a new species of smelt, W. Yarrell on, 1838, 108.
Osmium, on the preparation of, from the residues of the platinum ores, by Prof. E. Frémy, 1855, 63.
Ossiferous beds in the basins of the Forth, the Clyde, and the Tay, Dr. Hibbert on the, 1834, 642.
—— caves in Sicily, newly discovered, Baron Anca on some, 1860, 73.
Ossification, Dr. Lonsdale on, 1840, 165.
Ostrich of New Holland, Dr. Macartney on the organ of voice in the, 1836, 97.
——, two-toed, Dr. Riley on the foot of the, 1836, 98.
——, African, T. Allis on the toes of the, 1838, 107.
Otoliths of the cod, Prof. Redfern on the structure of the, 1859, 174.
Ova in Ascaris mystax, Dr. H. Nelson on the fecundation of the, 1855, 131.
——, of fishes Dr. W. H. Ransom on the structure of the, 1855, 131.
Ova of the Hippocrepian Polyzoa, Prof. Allman on the so-called, 1855, 118.
Ovis brachyura, O. dolichura, O. platyura, O. steatopyga, O. longicaudata, remarks on, by W. Ogilby, 1857, 105.
Ovo, chick *in*, on some discoveries relative to the, 1853, 68.
Ovum, S. D. Broughton on the development of the, 1831–32, 599.
——, mammiferous, Dr. Barry on the first changes consequent on fecundation in the, 1840, 129.
Ox, Tibetan, wild, 1857, 106.
Oxalic acid, Dr. Letheby on its action on the dead tissues of the animal body, 1846, 41.
——, citric, and tartaric acids, Prof. F. C. Calvert on their action on cotton and flax fibres, 1854, 65.
Oxalis tuberosa, Dr. Schiede on, 1835, 77.
Oxford clay of the neighbourhood of Cambridge, Rev. Prof. Sedgwick on the, 1845, 43.
Oxford University, statistics of, 1838, 170.
—— University, J. Heywood on the statistics of, 1846, 98.
Oxide of manganese, on determining the commercial value of, by Dr. A. P. Price, 1853, 47.
Oxides, new, of metals of the magnesian family, Dr. L. Playfair on, 1842, 35.
—— and salts, on a symmetrical arrangement of, by Dr. L. Playfair, 1859, 259.
Oxidizing agents, Dr. T. Anderson on the action of, on certain organic bases, 1850, 47.
Oxychloride of antimony, crystallized, Prof. J. F. W. Johnston on the chemical composition of, 1834, 587.
Oxygen gas, W. Maugham on an attempt to liquefy, 1838, 73.
—— and hydrogen, Rev. T. Exley on the combination of, 1838, 68.
——, Rev. T. Exley on the specific gravity of, 1838, 64.
——, Dr. T. Woods on the amount of heat produced by the combination of several metals with, 1852, 39.
——, Prof. W. A. Miller on the atomic weight of, 1860, 70.
—— and other gases, on the physiological effects of, by S. D. Broughton, 1831–32, 600.
—— and carbonic acid, platinum causes the combination of a mixture of, 1836, 55.
Oxygenation in animal bodies, Dr. B. W. Richardson on the process of, 1860, 143.
Oxyhydrogen flame, C. J. Jordan on increasing the intensity of the, 1844, 33.
Oyster, T. C. Eyton on the, 1858, 123.
——, Rev. J. B. Reade on the cilia and ciliary currents of the, 1845, 66.
Ozocerite, Prof. Johnston on a variety of, 1837, 51.
Ozone, F. De Moleyns on the nature and property of, 1841, 57.

Ozone, on an instrument for measuring the constant intensity of, by Dr. Lankester, 1858, 52.
Ozonometers of Drs. Schönbein and Moffat, Dr. Lee's remarks on a pamphlet by Dr. H. Barker on the, 1856, 40.

Pachydermata, ancient alluvium with bones of, 1850, 91.
Pachyderms of South America, fossil, Prof. Owen on the, 1846, 65.
Pacific to the Atlantic Ocean, on the formation of a railway from the, through British North America, by A. Whitney, 1858, 154.
Paddle-wheels, on, 1836, 131.
Pagellus acarine, notice of, by Dr. R. Parnell, 1838, 109.
Painting, artistic, Dr. Scoffern on gambogic acid and the gambogiates, and their use in, 1851, 51.
——, on the angular measurement of the picture in, by H. R. Twining, 1859, 64.
Palæoniscus catopterus in the new red sandstone of Tyrone, 1837, 88.
Palæontological relations of the American and European palæozoic strata, Prof. H. D. Rogers on the, 1856, 182.
—— discovery in Tuscany, Prof. Meneghini on, 1857, 79.
Palæontology of the tilestones or Silurio-Devonian strata of Scotland, 1858, 104.
Palæopyge Ramsayi, fossil, from the Cambrian rocks, 1855, 95.
Palæosaurus and Thecodontosaurus, W. Sanders on the age of the, 1849, 65.
Palæozoic basins of North America, 1856, 176.
—— fossils in the crystalline chain of the Forez in France, Sir R. I. Murchison on the discovery of, 1850, 96.
—— star-fishes, new, J. W. Salter on, 1856, 76.
—— glaciers, on the former probable existence of, by Prof. A. C. Ramsay, 1854, 93.
—— or older stratified deposits of the Russian empire, Sir R. I. Murchison on the, 1840, 105.
—— rocks, Prof. Phillips on the occurrence of some minute fossil crustaceans in, 1841, 64.
—— rocks of Scandinavia and Russia, Sir R. I. Murchison on the, 1844, 53.
—— rocks of Britain, Rev. Prof. Sedgwick on the classification and nomenclature of the, 1853, 54.
—— rocks of Germany, Sir R. I. Murchison on the, 1843, 52; 1854, 87.
—— rocks of Scotland, D. Page on the subdivisions of the, 1854, 91.
—— and metamorphic rocks of Scotland, D. Page on the subdivisions of the, 1855, 92.
—— strata, North American and British, Prof. H. D. Rogers on the correlation of the, 1856, 175.
Palinurus vulgaris, on the embryo state of, by R. Q. Couch, 1857, 102.
Palm, vegetable ivory (Phytelephas macrocarpa), on some uses to which the nuts of the, is applied, by Dr. G. Bennett, 1859, 130.
Palm-house in the Royal Botanic Garden at Kew, R. Hunt on the coloured glass of the, 1847, 51.
Palm-tree of Guiana, Sir R. Schomburgk's description of the, 1845, 71.
Palm-tribe, G. Gardner on the internal structure of the, 1837, 102.
Palmellæ, on an apparently undescribed state of the, by G. H. K. Thwaites, 1848, 87.
Palo de Vaca, C. W. Hamilton's notice of the pericarp and nut of the, 1835, 78.
Paloplotherium, a new genus of Pachyderm, from the freshwater eocene beds of the Hordle Cliffs, Prof. Owen on, 1847, 65.
Paludicella, British zoophyte, notice of, by Dr. Allman, 1843, 77.
Paludina Yatesii, notice of, 1837, 100.
Pan for evaporating saccharine solutions and other liquids at a temperature below 180° Fahr., R. Davis on a, 1859, 230.
Panopæa norvegica, in glacial clay in Belhelvie, 1859, 147.
Papaverine, on the constitution of, 1854, 64.
—— and meconine, on their relations to the other constituents of opium, by Prof. T. Anderson, 1854, 64.
Paper, R. Mallet on bleaching turf for the manufacture of, 1835, 47.
—— pulp, on Papyrus, Bonapartea, and other plants which can furnish fibre for, by Chevalier de Claussen, 1855, 104.
—— made from New Zealand flax, 1836, 132.
—— from the Phormium tenax and the Musa textilis, 1837, 58.
——, on some materials for making, by Prof. Archer, 1854, 97.
——, on its conversion into parchment, by Dr. Daubeny, 1857, 45.
——, rice-, made from the pith of the Aurelia papyrifera, W. Lockhart on, 1860, 169.
Papilionaceæ, description of Alexandria imperatricis, a new species of, 1844, 71.
Papyrus and other plants, for furnishing fibre for paper pulp, Chevalier de Claussen on, 1855, 104.
Paracyanogen, a new isomeric compound, Prof. J. F. W. Johnston on, 1836, 67.
——, Prof. Liebig on, 1841, 54.
——, decomposed into nitrogen gas, &c., 1841, 54.
Paraffine, a product of destructive distillation, Dr. Reichenbach on, 1834, 591.
——, on the composition of, from different sources, by Prof. T. Anderson, 1856, 49.
Parallax in vision, ocular, Sir D. Brewster on an, 1838, 7.
—— of α Lyræ, Rev. Dr. Robinson on the, 1837, 3.

Parallel lines, on a method of treating the doctrine of, by Prof. Stevelly, 1856, 8.
Paralysis, Dr. Carson on a case of unusual, 1842, 85.
——, R. Garner on alterations in the medulla oblongata in cases of, 1860, 129.
Paramæcium bursaria, Prof. Allman on, 1854, 105.
Parasites, remarks on some, 1857, 108.
Parasitic plant, on a, 1848, 84.
Parasitism among the Pycnogonidæ, Prof. Allman on a form of, 1859, 143.
Parchment, on the conversion of paper into, by Dr. Daubeny, 1857, 45.
Parhelia observed at St. Ives, J. K. Watts on, 1853, 33.
Paropamisus, Dr. Latham on the languages of the, 1851, 89.
Parrots, grey, notice of a pair hatching and rearing a young bird in England, 1843, 71.
Parthenogenesis in plants and animals, Dr. Lankester on, 1857, 113
Partridges of America, J. Gould on the, 1844, 61.
—— of the great watershed of India, Prof. Strickland on the, 1853, 71.
Parus melanotus, a new species of titmouse, notice of, 1837, 99.
Patella ancyloides, found on the coast of Arran, 1840, 137.
—— pellucida and P. lævis, C. W. Peach on the nidus and growth of the, 1842, 66.
Patellacea, British, Prof. E. Forbes on the genera of, 1849, 75.
Patent laws, Prof. W. J. M. Rankine on the, 1855, 208.
Patents, on the cost of obtaining, in different countries, by Prof. Hancock, 1850, 149.
Pathological cell-development, Dr. Gairdner on, 1850, 131.
—— drawing, Dr. Paxton on improvements in, 1849, 79.
Pauper labour: should Boards of Guardians make it self-supporting, or should they investigate the causes of pauperism?, by Prof. W. N. Hancock, 1851, 104.
Paupers, Prof. Alison on the state of the law of settlement and the removal of, in Scotland, 1852, 114.
Paving roads and streets with wood, J. I. Hawkins on, 1839, 127.
Pawnbroking in Ireland, Mr. Porter on, 1840, 181.
——, statistics of, Prof. W. N. Hancock on the, 1849, 93.
Pearls of the Conway river, R. Garner on the, 1856, 92.
Peat of the valley of the Bourne, Rev. W. D. Clarke on the, 1837, 94.
——, Prof. Johnston on some varieties of, 1840, 83.
——, R. Mallet on bleaching it for the manufacture of paper, 1835, 47.
——, on illuminating gas from, by R. L. Johnson, 1857, 51.
Peat, on the presence of several acids of the series $C^n H^n O^4$ among the products of the distillation of, by Prof. Sullivan, 1857, 58.
—— bogs, Dr. Adams on, 1838, 95.
—— moss, carbonized, on some of the medicinal properties of, by J. W. Rogers, 1857, 58.
Pecten, on the structure of the shell in some species of, by Dr. Dickie, 1859, 147.
—— islandicus, taken alive, 1846, 70.
Pellibranchiata, J. Alder and A. Hancock on the new order, 1847, 74.
Pelonaia, a new genus of Ascidian mollusca, J. Goodsir and Prof. E. Forbes on, 1840, 137.
Pelopium, a new metal contained in the Bavarian tantalite, Prof. H. Rose on, 1846, 37.
Peltier's (M.) induction electrometer, 1849, 11.
Pelvis of a Lapland giantess, Prof. Retzius on the, 1855, 134.
Pendulum, comparative, W. J. Frodsham on a, 1839, 24.
——, compensating, E. J. Dent on the rate of a, 1842, 10.
——, Rev. Dr. Robinson on the barometric compensation of the, 1843, 17.
——, new mode of suspending the, 1843, 101.
——, W. J. Frodsham on improvements in the mode of suspending the, 1839, 24.
—— experiment of Foucault, Rev. Prof. Walker on the, 1851, 19.
—— experiment, R. Roberts on mechanism to explain the, 1851, 117.
Pendulums, compensating, Prof. Stevelly on, 1836, 7.
——, E. J. Dent on improvements in, 1838, 35.
——, Prof. Stokes on the resistance of the air to, 1848, 7.
Penrose and Bennett's sliding helicograph, on, 1852, 129.
Pens, gold, Prof. J. Thomson on an improved modification of the ink-reservoir in, 1851, 118.
Pentacrinus europæus, R. Ball on, 1835, 72.
Pentasulphate of calcium as a means of preventing the grape disease, Dr. A. P. Price on, 1853, 46.
Pentethyl-stibene, G. B. Buckton on, 1859, 66.
Penuce ferroensis, a fossil wood from Faroe, notice of, 1834, 666.
Percussion lights, on their use for preventing collisions at sea and on railways, by Capt. Leach, 1857, 181.
Periodic phenomena, tables of forms for obtaining reports on, 1856, 105.
Periodicity, vital, Dr. Laycock on a general law of, 1842, 81.
Peritonitis and scirrhoma, Sir D. J. H. Dickson on a case of, 1839, 95.
Periwinkles, on the quantity of, shipped at Belfast, 1857, 106.

Permanganate of potash, on the preparation of the standard solution of, 1854, 74.
Permanganic acid, Prof. Schönbein on a peculiar formation of, 1847, 57.
Permian fossils of Cultra, Belfast Lough, Prof. W. King on the, 1853, 53.
—— system, as applied to Germany, Sir R. I. Murchison on the, 1843, 52; to England and Ireland, 54.
——, oolitic, liassic, and triassic formations, E. Hull on the south-easterly attenuation of the, 1856, 67.
Perodicticus of Bennett, and its relation to Stenops, Prof. Van der Hoeven on the genus, 1850, 125.
Peroxides, metallic, Prof. Graham on, 1834, 579.
Perspective, on teaching, by models, by H. R. Twining, 1849, 33; 1856, 9.
——, inversion of, Sir D. Brewster on some optical illusions connected with the, 1860, 7.
Pertussis, Dr. Hannah on its treatment by cold washing of the chest, 1840, 158.
Peruvian bark, Dr. Mackay on Matias bark, as being equal to the, 1839, 61.
—— bark, the places where the tree grows which yields the, 1860, 162.
—— mummies, description of two, by Dr. Bellamy, 1841, 75.
Pessaries, Dr. C. Clay on the evils arising from the use of common, 1842, 87.
Petals, on the colours of, by W. E. C. Nourse, 1858, 115; on the epidermal cells of, 119.
Petroleum, Prof. J. F. W. Johnston on, 1858, 60.
Petzval's (Prof.) new combination lens, 1858, 13.
Phænogamous plants of the Färoe Islands, 1834, 598.
Phalangista, account of a species of, killed in the county of Durham, by J. Hogg, 1859, 149.
Phanerogamous plants, Dr. Duncan on impregnation in, 1855, 106.
Pheasants, new, introduced into England, 1859, 148.
Philodina roseola, Prof. Agassiz on Protococcus nivalis, the ova of, 1840, 143.
Philology, Medo-Persic, Prof. MacDouall on, 1852, 90.
Phlegmonous erysipelas, Sir D. J. H. Dickson on a case of, 1839, 95.
Phoca variegata, taken on the coast of Sligo, notice of, 1836, 98.
—— annellata, taken in the Severn, notice of, 1836, 98.
Pholades, Dr. J. E. Gray on the boring of the, 1838, 111.
——, Dr. T. Williams on the branchiæ and mechanism of breathing in the, 1851, 82.
Pholas, J. Alder and A. Hancock on the branchial currents of, 1851, 74.
Phonautograph, an instrument for registering simple and compound sounds, Abbé Moigno on the, 1859, 62.
Phormium tenax, paper made from, 1836, 132.
Phosphate of lime bed in the Isle of Wight, on the position of the, 1848, 69.
Phosphatic nodules of the greensand of the north of Ireland, Prof. J. F. Hodges on the, 1852, 36.
Phosphorescence of the British seas, on the, 1849, 80, 81.
—— of potassium, W. Petrie on the, 1850, 59.
—— and composition of plate-sulphate of potash, Prof. F. Penny on the, 1855, 69.
—— and fluorescence of diamonds, Dr. J. H. Gladstone on the, 1859, 69.
—— by heat, on some new cases of, by Dr. T. L. Phipson, 1859, 76.
Phosphoric acid in natural waters, Dr. Voelcker on the proportion of, 1850, 63.
—— acid in rocks, on an indirect method of ascertaining the presence of, by Dr. Daubeny, 1855, 55.
—— phenomenon in a pond, Rev. T. Rankin on a, 1849, 29.
Phosphorite rock in Spanish Estremadura, Prof. Daubeny on the, 1844, 28.
Phosphorus, vapour of, Rev. T. Exley on the specific gravity of the, 1838, 64.
——, Dr. J. H. Gladstone on the compounds of the halogens with, 1849, 38.
——, Dr. J. Percy on copper containing, 1849, 39.
——, Prof. Schroetter on the allotropic condition of, 1849, 42.
——, on some optical properties of, by Dr. J. H. Gladstone and Rev. T. P. Dale, 1858, 15.
—— in strata and in all fertile soils, on the cause of the general presence of, by Rev. Dr. Buckland, 1849, 67.
—— and sulphur in organic compounds, on a method of determining, by Prof. Voelcker, 1855, 73.
——, organic, in legumine, Prof. Voelcker on the proportion of, 1857, 60.
Photobarograph, on the detection and measurement of atmospheric electricity by the, by M. J. Johnson, 1855, 40.
Photochemical pile, new, M. Niépce on a, 1859, 260.
—— researches, with reference to the laws of the chemical action of light, by Prof. Bunsen and Prof. H. E. Roscoe, 1855, 48.
Photochromatic and pictorial impressions on the retina of the human eye, Rev. Dr. Scoresby on, 1854, 12.
Photogenic drawing, Dr. Schafhaeutl on a new method of, 1840, 71.
—— process, Daguerre's, H. F. Talbot on, 1839, 3.
Photographic camera, improvement on the, by Sir D. Brewster, 1849, 5.
—— lens, new, T. Sutton on a, 1859, 63.
—— paper for automatic registration, C. Brooke on, 1849, 34.
—— pictures for the stereoscope, binocular,

A. Claudet on the angle to be given to, 1853, 4.
Photographic self-registering apparatus at Kew, F. Ronalds's account of the, 1846, 10.
—— and micrometrical drawings of the lunar surface, Prof. Phillips on, 1854, 25.
Photographometer, Claudet's, 1849, 35.
Photographs, chromatic, J. Mercer on, 1858, 57.
——, collodion, on engraving, by means of fluoric acid gas, by C. Pooley, 1856, 58.
——, coloured, Sir J. F. W. Herschel on, 1841, 40.
—— of fluorescent substances, Dr. J. H. Gladstone on, 1859, 69.
—— of the moon, Prof. Phillips on, 1853, 14.
—— of the moon and sun, Rev. J. B. Reade on, 1854, 10.
—— of the moon's surface, Dr. Edwards on, 1854, 66.
—— upon albumen, 1854, 67.
——, Prof. Grove on a paper capable of giving positive, by one process, 1844, 37.
——, on printing, with suggestions for introducing clouds and artistic effects, by E. Vivian, 1856, 18.
—— of quarries, 1858, 80, 93.
Photography: R. Hunt on the influence of the ferrocyanate of potash on the iodide of silver, 1841, 47.
——, on a very curious fact connected with, discovered by M. Möser, 1842, 14.
——: R. Hunt on chromatype, a new process, 1843, 34.
——: Sir D. Brewster on a process by which dormant pictures are produced, capable of development by the breath, or by keeping in a moist atmosphere, 1843, 8.
——: on the amphitype, a new process, by Sir J. F. W. Herschel, 1844, 12.
——: on the ferrotype, and the property of sulphate of iron in developing photographic images, by R. Hunt, 1844, 36.
——: on the electrolysotype, by Dr. T. Woods, 1844, 36.
——, experiments on, by Prof. Grove, 1844, 37.
——, H. F. Talbot on, 1844, 105.
——: Sir D. Brewster on an improved method of taking positive Talbotypes, 1845, 10.
——: C. Brooke on the results obtained by automatic registration of the declinometer, 1847, 40.
——, C. Brooke on some phenomena of, 1847, 48.
——, N. S. Maskelyne on the bearings of, on chemical philosophy, 1847, 56.
——, Dr. W. B. Carpenter on its application to microscopic objects, 1847, 48.
——: A. Claudet on the action of the red, orange, and yellow rays upon iodized and bromo-iodized silver plates, 1848, 50.
—— in the Daguerreotype process, A. Claudet on the theory of the phenomena of, 1849, 35.
Photography: on the dynactinometer for comparing the power of object-glasses, and for measuring the intensity of the photogenic light, by A. Claudet, 1850, 12.
——, Sir D. Brewster on improvements in, 1850, 6.
——, Prof. Wyville Thomson on its application to the compound microscope, 1850, 126.
——: A. Claudet on the dangers of the mercurial vapours in the daguerreotype process, 1851, 44.
——: A. Claudet on the use of a polygon to ascertain the intensity of the light at different angles, 1851, 45.
——: Sir D. Brewster on the form of images produced by lenses and mirrors of different sizes, 1852, 3.
——: on collodion negatives, by G. R. Berry, 1854, 64.
——, on the management of some difficult subjects in its application to science, by S. Highley, 1854, 69.
——, on the means of applying it to war purposes, by S. Highley, 1854, 70.
——, on its application to the delineation of microscopic objects, by F. Wenham, 1854, 116.
——: on albuminized collodion, by W. S. Ward, 1856, 58.
——, on a new method of exhibiting, by its means, the phosphorescence and fluorescence of bodies, by the Abbé Moigno, 1857, 53.
——: on the preservation of albuminized collodion plates, by W. S. Ward, 1857, 61.
——, on a new process in, by W. McCraw, 1858, 18.
——, notice of the use of platinum in, 1859, 258.
——, celestial, H. Draper on a reflecting telescope for, erecting at Hastings, near New York, 1860, 63.
Photolithographs, on a process for obtaining, by Prof. A. C. Ramsay, 1855, 69.
Photometer, new, Dr. A. P. Price on a, 1853, 9.
——, new, M. Babinet on a, 1854, 2.
——, description of a, by Dr. F. Bernard, 1854, 2.
——, new, by the Abbé Moigno, 1859, 62.
——, chemical, new, M. Niépce on a, 1859, 260.
Photometry by comparison, R. Potter, jun., on an instrument for, 1831–32, 556.
——, or mode of measuring diffuse daylight, Dr. Ure on, 1839, 7.
Phthisis, Sir D. J. H. Dickson on a case of, 1839, 95.
—— in the army, F. G. P. Nelson on, 1858, 189.
Phyllanthus, B. Clarke on the foliage and inflorescence of the genus, 1846, 91.
Physical results, Rev. Dr. H. Lloyd on the method of graphical representation as applied to, 1843, 4.

Physical and vital forces, G. Newport on the reciprocal relation of the, 1850, 133.
Physics, Dr. Reid on the study of, 1835, 126.
——, on a general mechanical theory of, by J. S. S. Glennie, 1859, 58.
——, on the philosophy of, by Rev. Dr. J. G. Macvicar, 1859, 59.
—— as a branch of the science of motion, J. S. S. Glennie on, 1860, 56.
Physiological action of bromine and its compounds, Dr. Glover on the, 1840, 157.
—— actions of the yellow and red prussiates, H. Letheby on the difference in the, 1846, 41.
—— condition of the blood in erysipelas, J. Goodman on the, 1847, 94.
—— properties of methyle, ethyle, and amyle, Dr. J. Turnbull on the, 1854, 76.
—— researches, S. D. Broughton on the progress of, 1831–32, 598.
Physiology of cells in relation to consciousness and adaptive movements, Dr. Laycock on the, 1854, 110.
——of the encephalon, Dr. W. B. Carpenter on the, 1846, 92.
—— of fascination, J. Braid on the, 1855, 120.
—— of the spermatozoa, Prof. Kölliker on the, 1855, 125.
——, animal and vegetable, Mr. Bartlett's comparative view of, 1841, 77.
——, vegetable, Mr. Niven on, 1837, 102.
——, vegetable, Dr. Daubeny's experiments on, 1847, 82.
——, electro-, researches in, by Prof. Matteucci, 1846, 28.
Physophoridæ, Prof. Huxley on the, 1851, 78.
Phytelephas macrocarpa (vegetable ivory palm), Dr. Lankester on the, 1845, 70.
—— macrocarpa (vegetable ivory palm), on some of the uses to which the nuts are applied, by Dr. G. Bennett, 1859, 130.
Phytocrinus identical with Comatula, 1840, 105.
Picamar, a product of destructive distillation, Dr. Reichenbach on, 1834, 591.
Picture, on the angular measurement of the, in painting, by H. R. Twining, 1859, 64.
Pigment, Dr. Traill on an antimonial compound applicable as a, 1837, 58.
——, blue, R. Phillips on a, 1838, 60.
Pigments, on the composition of two mineral substances (Indian red and raw sienna) employed as, by Dr. T. H. Rowney, 1855, 70.
Pigotite (mineral) of the caves of Cornwall, Prof. J. F. W. Johnston on, 1853, 52.
Pile, Magnus's monothermic, Prof. Tyndall on an experiment in thermo-electricity with, 1851, 18.
——, photochemical, new, M. Niépce on a, 1859, 260.
—— with sulphate of lead, M. E. Becquerel on a, 1860, 59.
Pile-driving, Dr. R. Greene on Nasmyth's steam-hammer for, 1845, 92.
Piles: on the limit of weight which may safely be laid on a pile driven into the ground, by Rev. Dr. Scoresby, 1854, 163.
Pillars, sculptured, of Scotland, J. Stuart on the, 1859, 197.
Pilularia globulifera, Dr. G. Lloyd on the, 1836, 102.
Pine-tribe, J. Nuttall on the management of the, 1836, 104.
Pines, European, Capt. Widdrington on some species of, 1841, 76.
—— of Spain, Capt. Widdrington on the, 1847, 89.
—— and firs, Rev. Prof. M'Cosh on the morphology of, 1854, 99.
Pinguicula, Dr. Lankester on the epidermal appendages of the genus, 1850, 113.
Pinions and wheels, toothed, R. Roberts on the correct sizing of, 1849, 127.
Pinus and Abies, Capt. Cook on the genera, 1838, 117.
—— austriaca (nigrescens) and P. pumilio, Capt. Widdrington on, 1841, 76.
Pit-sinking, improved working barrel for, 1840, 208.
Pit-work, J. S. Enys on the connexion which exists between improvements in, and the duty of steam-engines in Cornwall, 1841, 103.
Pittakall, a product of destructive distillation, Dr. Reichenbach on, 1834, 591.
Placodus, teeth of the, discovered in the triassic drift, in the neighbourhood of Frome, by C. Moore, 1860, 38.
Placoids of the lower old red sandstone of Scotland, Hugh Miller on the, 1850, 91.
Plague and quarantine, Dr. Bowring on, 1838, 120.
Plana's (M.) work on the theory of the moon, 1836, 13.
Planaria, J. G. Dalyell on the propagation of, 1834, 602.
Planes or surfaces on metals, J. Whitworth on producing, 1840, 192.
Planet, new (either Daphne or the 46th Asteroid), Mr. Pogson's discovery of a, 1857, 31.
Planets and comets, Sir J. W. Lubbock on the calculation of the perturbations of, 1847, 9.
——, Prof. J. C. Adams on the application of graphical methods to the determination of the perturbations of, 1849, 1.
——, on the perihelia and ascending nodes of the, by E. J. Cooper, 1858, 27.
——, J. S. S. Glennie on a general law of rotation applied to the, 1860, 58.
Planetary and lunar observations made at Greenwich, G. B. Airy on the state of the reductions of the, 1844, 2.
—— orbits, on the inclination of the, by J. P. Hennessy, 1859, 34.
—— perturbations, Rev. W. G. Penny on, 1857, 27.
Plant, on the correspondence between the

leaf-venation and ramification of the, by Rev. Prof. M'Cosh, 1854, 100.
Plant which yields gutta percha, Dr. Lankester on the, 1847, 86.
—— and an animal, J. Hogg on the distinctions of a, 1860, 111.
Plants and animals, on the alternation of generations and parthenogenesis in, by Dr. Lankester, 1857, 113.
——, flowering, and ferns of Great Britain, attempt to classify the, by J. G. Baker, 1855, 98.
——: on the comparison of the flora of Britain with that of other countries, by Miss Twining, 1847, 87.
—— in Great Britain, exhibition of a series of specimens illustrating the distribution of, by Prof. Balfour, 1855, 100.
——, A. Petermann on the temperature of the British Isles, and its influence on the distribution of, 1849, 26.
——, British, additions to, 1839, 92; 1848, 84.
—— of Cambridgeshire, on the geographical distribution of the, 1831–32, 606.
——, endemic, Prof. E. Forbes on the distribution of, considered with regard to geological changes, 1845, 67.
——, on their geological distribution in some districts of Yorkshire, by Dr. Carrington, 1858, 115.
——, British, Rev. W. S. Symonds on the selection of a peculiar geological habitat by some, 1860, 102.
—— found in the sulphureous waters of Yorkshire, Dr. Lankester on the, 1840, 143.
——, marine, in Worcestershire, Prof. Buckman on the occurrence of, 1847, 61.
——, semi-marine, in the vale of the river Severn, 1847, 62.
—— found in the neighbourhood of Cork, 1843, 79.
—— of the south and west of Ireland, Prof. Balfour on the, 1852, 64.
——, on the altitudinal ranges of, in the north of Ireland, by Prof. Dickie, 1852, 66.
——, phænogamous, of the Färoe islands, W. C. Trevelyan on the, 1834, 598.
——, South African, Dr. G. A. Walker-Arnott on the synonyms and affinities of, 1840, 147.
——, Dr. Royle on their geographical distribution in British India, 1845, 74.
——, cotton, Prof. Royle on the different species of, 1842, 61.
—— adapted for field-enclosures in India, Dr. H. Cleghorn on, 1850, 113.
—— of part of the Himalaya and Tibet, Major Madden and Capt. Strachey on the, 1851, 72; of Western Thibet, by Dr. T. Thomson, 73.
—— of Mexico, notice of some, 1835, 77.
——, Dr. Lankester on the germination of, 1845, 69.
Plants: Dr. Aldridge on the pollen and vegetable impregnation, 1840, 144.
——, phanerogamous, on impregnation in, by Dr. Duncan, 1855, 106.
——, on the final causes of the sexuality of, in reference to Mr. Darwin's theory, 1860, 109.
——, flowering, on the development of the embryo of, by Prof. Henfrey, 1856, 85.
——, Prof. Agardh on the originary structure of the flower in, 1833, 432.
——, specific characters of, considered in morphological connexion, J. Ball on the, 1845, 74.
——, exogenous, morphological analogy between the disposition of the branches of, and the venation of their leaves, Prof. M'Cosh on the, 1852, 66.
——, on vegetable morphology and the theory of the metamorphosis of, by M. T. Masters, 1859, 136.
——, on the theory of the formation of wood and the descent of the sap in, by Dr. Lankester, 1851, 72.
——, cells of, Dr. Allman on the mathematical relations of the forms of the, 1835, 79.
——: Prof. Henfrey on the development of cells, 1846, 90.
——, on the epidermal cells of the petals of, by T. West, 1858, 119.
——, aquatic, Dr. Lankester on the epidermal appendages of, 1850, 113.
——: Prof. Henfrey on the anatomy of monocotyledonous stems, 1847, 83.
——, Dr. Daubeny on the action of light on, 1833, 436; 1835, 73.
——, R. Hunt on the influence of light on the growth of, 1843, 35.
——, Prof. Maccaire on the directions of, as influenced by light, 1847, 55.
——, Dr. Daubeny on the action of the different rays of the spectrum upon, 1847, 82.
——, on the growth of, in abnormal atmospheres, by Dr. J. H. Gladstone and Mr. G. Gladstone, 1850, 54.
——, Dr. Daubeny on the effects of arsenic on, 1836, 76.
——: on the colour-stripes of a rose, by Prof. Phillips, 1848, 86.
——: on the colours of leaves and petals, by W. E. C. Nourse, 1858, 115; 1859, 138.
——, on associations of colour and relations of colour and form in, by Prof. Dickie, 1854, 98.
——, on some traces of harmonious colours in, and the plumage of birds, 1854, 101.
——, experiments on the bark of, 1837, 102.
——, Dr. Lankester on the tissues of, 1839, 78.
——, on the presence of copper in the tissues of, by Dr. Odling and Dr. Dupré, 1857, 55.
——, Prof. Wartmann on some physical properties of the solid and liquid constituent parts of, 1851, 19.

Plants, on the ashes of, 1845, 34, 35, 36, 37.
——, Rev. J. B. Reade on the origin of the solid materials in the ashes of, 1837, 103.
——, Dr. Dalton on the non-production of carbonic acid by, 1837, 58.
——, on urea as a direct source of nitrogen to, by Dr. C. A. Cameron, 1857, 44.
——, assimilation of nitrogen by, J. B. Lawes, Dr. Gilbert, and Mr. Pugh on the, 1857, 51.
——, nitrates in, Prof. Sullivan on a process for the determination of, 1857, 58.
——, on the presence of fluorine in, 1849, 43.
——, Dr. S. Macadam on the presence of iodine in, 1854, 72.
——, R. Ball on their destruction by animal odour, 1841, 76.
——, W. B. Randall on common salt as a poison to, 1848, 58.
——, results of experiments of salt on, by Dr. Voelcker, 1850, 114.
——, British, J. Hogg on some variations of, 1857, 96.
——, M. T. Masters on the normal and abnormal variations from an assumed type in, 1860, 112.
——; on a peculiarity in the Protococcus nivalis, 1848, 86.
——, on an apparently undescribed state of the Palmellæ, and on gemmation in the lower tribes of, by G. H. K. Thwaites, 1848, 87.
——: on the parasitic character of Rhinanthus crista-galli, 1848, 84.
——, notice of a monstrosity of Bellis perennis, by Prof. Dickie, 1852, 66.
——: on the transmutation of Ægilops into Triticum, 1852, 68.
——, report of committee for registration of periodic phenomena in, 1853, 70.
——, comparison of the periods of the flowering of, in the Botanic Garden of Belfast and the Jardin des Plantes at Paris, 1846, 90.
——: on the flowering of Victoria regia in the Royal Botanic Garden, Glasgow, by P. Clark, 1855, 102.
——: experiments on the roots of the Canna indica, with reference to their value in an economical point of view, by W. T. Iliff, 1847, 85.
——: Prof. Allman on a peculiarity in the structure of the stomata of Ceratopteris thalictroides, 1847, 81.
——: on the properties and composition of the leaves of the cocoa, by Prof. J. F. W. Johnston, 1853, 43.
——: on the true nature of the tendril in the cucumber, by Dr. T. B. Salter, 1846, 88.
——, on the temperature of the flowers and leaves of, by E. J. Lowe, 1859, 135.
—— and trees, on the aversion of certain, to the neighbourhood of each other, by Dr. G. Buist, 1859, 133.
Plants for a botanic garden, Mr. Niven on the arrangement of, 1835, 80.
——, cycadaceous, grown in England, 1859, 142.
——, succulent, Dr. Macartney on a method of preserving, 1836, 100.
—— in sea-water, R. Warington on the growth of, 1854, 103.
——, Capt. Ibbetson on electrotyping, 1845, 74.
——, on those which form the principal part of the Irish turf-bogs, by D. Moore, 1857, 97.
——, fossil, Prof. Göppert's tabular view of, 1845, 48.
——, fossil, from Devonshire and Pembrokeshire, Rev. D. Williams on, 1835, 63.
——, fossil, of the "insect limestone" of the lower lias at Strensham, Worcestershire, Prof. Buckman on the, 1848, 66.
——, fossil, of Scotland, Hugh Miller on the, 1855, 83.
——, fossil, of the carboniferous period, in the Tarentaise, 1848, 64.
——, fossil, collected at Sunday River, Cape frontier, 1851, 68.
—— of the New South Wales and Van Diemen's Land coal-fields, F. M'Coy on the, 1847, 64.
Plate glass, silvered, J. Nasmyth on bending it into mirrors, 1839, 7.
—— glass, on the manufacture of, in England, 1846, 101.
Platina, Prof. Hare on a method of fusing, 1837, 41.
——, finely divided, Rev. Dr. Robinson on the influence it exerts on the electrodes of a voltameter, 1846, 46.
—— and tin, protochlorides of, Dr. Kane on some combinations of, 1835, 44.
Platinum, Prof. T. Andrews on the atomic weight of, 1852, 33.
——, on the extraction of metals from the ore of, by Prof. Frémy, 1855, 63.
——, the combination of hydrogen and oxygen effected by, 1838, 68.
—— and magnesia, and barytes and platinum, cyanurets of, Sir D. Brewster on the optical properties of, 1850, 5.
—— wire, Dr. W. Barker on electric currents passing through, 1835, 33.
Platychærops Richardsonii, a new mammal, from the London clay of Herne Bay, 1854, 80.
Platygnathus rugosus, notice of, 1839, 75.
Plecotus auritus, Prof. H. Carlile on the ear of the, 1857, 117.
Pleiocene deposits, newer, J. Smith on the shells of the, 1838, 87.
Pleistocene tract in the Isle of Man, Prof. E. Forbes on a, 1840, 104.
—— formation in Russia, Sir R. I. Murchison on the, 1840, 109.
Plesiosaurus, E. Charlesworth on the discovery of a large specimen of, at Kettleness Cliff, Yorkshire, 1844, 49.

Pleiosaurus discovered in lias at the alum-works at Kettleness, near Whitby, 1848, 78.
——, new, in the York Museum, Prof. Phillips on a, 1853, 54.
——, on the atlas and axis of the, by L. Barrett, 1858, 78.
Pleurodictyum problematicum, a British fossil, 1839, 69.
Pleurotoma teres, new to the British seas, 1844, 64.
Pliosaurus, R. Damon on a paddle of, found at Kimmeridge, 1860, 75.
Ploughing-machines, on, 1853, 121.
Plum, Prof. Robb on an anomalous form of the, in the gardens of New Brunswick, 1840, 148.
Plumatella fruticosa, Prof. Allman on the locomotive larva of, 1847, 74.
—— repens, Dr. Allman on, 1843, 74.
Plumbago, A. Rose on the discovery of, in the island of Mull, 1850, 102.
Plumularia, observations on the genus, and on P. formosa, by G. Busk, 1850, 118.
—— halecioides, a new species of Sertularian zoophyte, 1858, 126; P. similis, 128.
Plymouth Breakwater, W. Stuart on the, 1841, 99.
Poinsôt's theory of rotation, Prof. J. C. Maxwell on an instrument to illustrate, 1856, 27.
Points or atoms, J. K. Smythies on the motion of, 1839, 24.
Poisoning, on the medical indications of, by W. E. C. Nourse, 1856, 97.
——, E. R. Harvey on the mode of death by aconite, 1860, 133.
—— by the vapours of burning charcoal, Dr. G. Bird on the, 1839, 101.
Poisonous properties of the salts of lead, Dr. A. T. Thomson on the, 1831–32, 604.
Poisons, effects of, on the animal economy, Dr. Hodgkin and Dr. Rüppell on the, 1834, 681.
——, arsenical, W. Herapath on, 1836, 67.
——, contagious, and miasms, Prof. Liebig on, 1840, 72.
Poisson's (M.) theory of the constitution of the atmosphere, Sir J. W. Lubbock on, 1837, 31.
—— theoretic anticipation of magnecrystallic action, Prof. Tyndall on, 1852, 20.
Polar clock or dial, Prof. Wheatstone's description of the, 1848, 11.
—— expedition (Franklin's), Capt. Snow on the, and the possible recovery of its scientific documents, 1860, 180.
Polarimeter or polariscope, Sir D. Brewster's, 1842, 13.
——, Dr. F. Bernard on a, 1854, 6.
Polarimetry, Dr. F. Bernard on, 1854, 4.
Polariscope, simple, A. Pritchard on a, 1835, 112.
——, Goddard's, 1839, 8.
Polarity, Sir D. Brewster on a new kind of, in homogeneous light, 1838, 13.
Polarity of light, new, Sir D. Brewster on a, 1845, 7.
—— of light, G. B. Airy on a new apparent, 1840, 3.
—— of diamagnetic bodies, Prof. Tyndall on the, 1855, 22.
Polarisation, Rev. E. Craig on, 1836, 19.
——, Sir D. Brewster on a new species of, related to the direction of the grooves in grooved surfaces, 1847, 32.
——, on determining whether the luminiferous vibrations are parallel or perpendicular to the plane of, by the Abbé Moigno, 1857, 9.
——, plane of, Prof. Jellett on a new instrument for determining the, 1860, 13.
——, M. Verdet on the dispersion of the planes of, of the coloured rays produced by the action of magnetism, 1860, 54.
——, J. T. Goddard on the use of the oxy-hydrogen microscope in exhibiting the phenomena of, 1839, 8.
—— of the atmosphere, Sir D. Brewster on the, 1847, 32.
—— of the atmosphere, Sir D. Brewster on some new phenomena in the, 1850, 6.
——, atmospheric, Dr. F. Bernard on an atmopolarimeter for observations on, 1854, 6.
——, circular, Rev. Prof. Powell on apparatus for applying, to chemical inquiries, 1842, 32.
—— in liquids, circular, Prof. MacCullagh on M. Laurent's attempt to explain the phenomenon of, 1844, 7.
—— of light, A. Pritchard's apparatus for illustrating the, 1835, 112.
—— of light, Rev. Prof. Challis on a new theory of, 1847, 1.
—— of light by rough surfaces and white dispersing surfaces, Sir D. Brewster on the, 1844, 11.
—— of light, on the use of the amethyst plates in experiments on the, by Sir D. Brewster, 1858, 13.
——, elliptic, Rev. Prof. Powell on the wave theory as connected with, 1839, 2.
——, elliptic, in light, reflected from various substances, Rev. Prof. Powell on, 1843, 9, 10.
—— of light, elliptic, Rev. Prof. Powell on certain points connected with, 1844, 7.
—— of light, elliptic, by metallic reflexion, Rev. Prof. Powell on, 1845, 6.
—— of light, elliptic, by reflexion, Rev. Prof. Powell on certain cases of, 1846, 3.
——, elliptic, Mr. Dale on, 1846, 5.
Polarized light, Sir D. Brewster on the action of crystallized surfaces on, 1836, 13.
—— light, Sir D. Brewster on the rings of, in specimens of decomposed glass, 1840, 6.
—— light, Rev. Dr. Lloyd on the phenomena of thin plates in, 1841, 26.
—— light reflected and transmitted by thin plates, Rev. Dr. Lloyd on the affections of, 1859, 14.

Polarized light, elliptically, Prof. Powell on certain cases of, 1842, 13.
—— light, Prof. T. Andrews on the discovery of minute quantities of soda by the action of, 1852, 33.
—— light in doubly refracting crystals, M. Dove on a method of measuring the absorption of, 1854, 10.
Polarizer, new, L. Foucault on a, 1857, 5.
Polarizing light, Prof. Forbes on the use of mica in, 1839, 6.
—— microscope, Sir D. Brewster on an improvement in the, 1840, 10.
—— structure in the crystalline lens after death, Sir D. Brewster on the, 1836, 16.
—— structure of the eye, Sir D. Brewster on the, 1850, 5.
Political economy and statistics, Prof. Lawson on the connexion between, 1843, 94.
Pollen, Prof. Henfrey on the development of, 1848, 84.
—— and vegetable impregnation, Dr. Aldridge on the, 1840, 144.
Pollicipes, on a new species of, in the inferior oolite near Stroud, by Rev. P. B. Brodie, 1856, 64.
—— scalpellum, C. W. Peach on, 1845, 65.
Polycystina, a new section of animalcules from Barbados, Sir R. H. Schomburgk on, 1847, 70.
Polygala oxyptera, Reich., new to the English flora, 1839, 92.
Polyhedron of forces, J. T. Graves on the, 1856, 1.
Polyparia, fossil, Dr. Jacob on, 1835, 59.
Polyp, freshwater (Hydra viridis), Prof. Allman on the structure of the, 1853, 64, 70.
Polypes, Tubularian and Sertularian, Prof. Allman on the medusoid structure in the reproductive gemmæ of the, 1852, 70.
Polytechnic School at Paris, on the education in the, 1841, 96.
Polyzoa, two new species of (Avenella dilatata and Arachnidia hippothoides), Rev. T. Hincks on, 1858, 128.
—— from Port Natal, Algoa Bay, and Table Bay, in South Africa, G. Busk on, 1850, 118.
——, marine, collected by G. Barlee in Shetland and the Orkneys, with descriptions of the new species, by G. Busk, 1859, 144.
——, Hippocrepian, on the signification of the so-called ova of the, and on the development of the proper embryo in these animals, by Prof. Allman, 1855, 118.
Poncelet's theorems for the linear representation of quadratic radicals, Prof. Sylvester on a generalization of, 1860, 7.
Pontia, notice of some specimens of, 1841, 72.
Poole Harbour, some remarks on, 1837, 94.
Population, Prof. Pryme on the different methods employed to estimate the amount of, 1845, 91.
Population of Great Britain and Ireland, on the distribution of the, by A. Petermann, 1848, 113.
——, French, Baron Dupin on the influence of the price of grain on the, 1836, 132, 133.
Porcelain, Sir J. Robinson on Mr. Prosser's method of making, 1842, 114.
——, G. Bontemps on the colouring of, by metallic oxides, 1849, 34.
—— manufacture of Glasgow, Dr. Strang on the, 1856, 153.
Porpoise, Dr. Sharpey on the anatomy of the blood-vessels of the, 1834, 682.
Porrigo rodens (a pustulous disease of the skin), Dr. A. T. Thomson on, 1841, 77.
Posidonia minuta in the new red sandstone of Tyrone, notice of, 1837, 88.
Potash, acetate of, Prof. Barker on the separation of peroxide of iron from sulphuric and muriatic acids by, 1835, 52.
——, bichromate of, Prof. T. Thomson on its manufacture at Glasgow, 1840, 62.
——, bichromate of, W. K. Sullivan on some double salts formed with, 1858, 67.
——, chromate and bichromate of, for the estimation of iron in the common ores, and for the analysis of the clay-band and black-band ironstone, Prof. F. Penny on, 1850, 58.
——, chrysammate of, Sir D. Brewster on a new property of light exhibited in the action of, upon common and polarized light, 1846, 7.
——, ferrocyanate of, R. Hunt on its influence on the iodide of silver as a photographic preparation, 1841, 47.
—— or soda, hypochlorites of, Dr. A. P. Price on a method for determining the amount of available chlorine in, 1853, 48.
——, phosphate of, on its use in a salt-meat dietary, 1855, 63.
——, plate-sulphate of, on the composition and phosphorescence of, by Prof. F. Penny, 1855, 69.
——, prussiate of, Prof. T. Thomson on the manufacture of, in Glasgow, 1840, 61.
Potass, caustic, R. Mallet on a new case of the chemical action of light in the decoloration of recent solutions of, 1838, 61.
Potassa and soda, Prof. F. Penny on the action of nitric acid on the chlorates, iodates, and bromates of, 1840, 79.
Potassium, carburet of, Prof. E. Davy on, 1836, 63.
——, cyanide of, on its application to killing insects for the cabinet, 1854, 106.
——, cyanuret of, Dr. Bromeis on its formation in a blast furnace, 1842, 34.
——, iodide of, Prof. F. Penny on, 1852, 37.
—— and ammonium, palladio-chlorides of, Sir D. Brewster on the dichroism of the, 1842, 13.
——, explosive, Dr. J. H. Gladstone on, 1857, 47.
——, J. Goodman on the calorific phenomena of, 1848, 53.

Potassium, W. Petrie on the phosphorescence of, 1850, 59.
—— and carbon, Prof. E. Davy on a compound of, 1836, 63.
—— and iron, Prof. Calvert and R. Johnson on alloys of, 1855, 50.
Potato, Dr. Kemp on the disease of the, 1846, 44.
——, W. Hogan on the means of obviating the ravages of the disease in the, 1846, 89.
——, on proposed substitutes for the, 1846, 90.
——, on the nutritive properties of the, as compared with wheat, by J. W. Rogers, 1857, 57.
—— crops, on the preservation of the, by Chevalier Claussen, 1855, 54.
—— seeds, J. D. Murray on the vitality of, 1847, 86.
Potatoes, Chevalier Claussen on the effect of sulphate of lime upon, 1853, 38.
Poverty and crime, statistics bearing upon the relations existing between, by W. M. Tartt, 1856, 159.
Powell's (Prof.) measures of the indices of refraction for the lines "G" and "H" in the spectrum, Sir D. Brewster on, 1840, 5.
Power-loom, new, notice of a, 1854, 156.
Preservation of fresh meat, results of experiments on the, by G. Hamilton, 1854, 69.
—— of milk, notice of a process for the, 1854, 74.
Pressure, on the solidification of bodies under, by W. Fairbairn, 1854, 149.
——, its effect on the temperature of fusion of different substances, W. Hopkins on, 1854, 57.
Pressure-gauge, deep-sea, on a, 1859, 236.
Prévost's theory of exchanges, experiments on radiant heat involving an extension of, by B. Stewart, 1858, 23.
Priapulus caudatus, Prof. Phillips on a living specimen of, 1853, 70.
—— caudatus, notice on, 1854, 113.
Prices and wages during the years from 1842–49, G. R. Porter on a comparative statement of, 1849, 101.
——, on a form of table for collecting returns of, in Ireland, by Prof. W. N. Hancock, 1849, 92.
Principal relations, Sir W. R. Hamilton on the calculus of, 1836, 41.
Printing-press, universal, T. J. Silbermann on a, 1858, 220.
Prionites superciliosus from Mexico, 1837, 99.
Prism of crystals of chromate of lead, 1837, 18.
——, Nicol's, on a new polarizer resulting from a modification of, by L. Foucault, 1857, 5.
——, on its use in detecting impurities, by Dr. J. H. Gladstone, 1857, 48.
Prison, Wakefield, on the influence of various circumstances in causing loss or gain in the weight of the prisoners, by W. R. Milner, 1858, 139.
Prisons, on the effect of good and bad times on committals to, by Rev. J. Clay, 1854, 133.
Probabilities, calculus of, Sir W. R. Hamilton on some investigations connected with the, 1843, 3.
——, on a principle in the theory of, by Prof. Young, 1844, 1.
Procellaria, on a new species of, 1831–32, 598.
—— Thetis, a new Thalassidroma from the Galapagos, 1852, 72.
Projectiles, W. B. Adams on, 1835, 203.
——, on the mutual influence of capillary attraction and motion on, by J. Gall, jun., 1855, 206.
Projection, isometrical, T. Sopwith on instruments to facilitate the drawing of objects in, 1838, 154.
Propeller, chain, Robertson's patent, P. Spence on, 1859, 243.
——, Fisher's Venetian screw, J. Grantham on, 1854, 151.
——, marine, invented about the year 1825 by J. Perkins, J. I. Hawkins on the, 1843, 100.
Proteunogenic bodies, Dr. Kemp on, 1845, 31.
Protocarbide of iron for the purification of water, T. Spencer on, 1859, 85.
Protochlorides of platinum and tin, 1835, 44.
Protococcus nivalis, Prof. Agassiz on, 1840, 143.
—— nivalis, M. Moggridge on a peculiarity in the, 1848, 86.
Protoxide of lead, atomic weight of, 1839, 44.
Prussian blue, Prof. T. Thomson on its manufacture in Glasgow, 1840, 62.
Prussiates, yellow and red, Dr. Letheby on the difference in the physiological actions of the, 1846, 41.
Psalidognathus Friendii, Mr. Wailes and Mr. Adamson's notice of, 1838, 113.
Psammodus, Prof. Owen on the teeth of the genus, 1838, 140.
Psychometer, or measurer of refrigeration, by Dr. Osborne, 1835, 95.
Psychrometer, self-registering, C. Brooke on a, 1846, 17.
Pteraspis, on the genus, by Prof. Huxley, 1858, 82.
Pterichthys, on the restoration of, in 'The Testimony of the Rocks,' by Rev. Dr. Longmuir, 1859, 263.
—— Milleri, notice of, 1840, 99.
Pterochilus, a new genus of nudibranchiate mollusca, notice of, 1844, 66.
Pterodactyle, on a new genus (Dimorphodon) of, with remarks on the geological distribution of flying reptiles, by Prof. Owen, 1858, 97.
——, on remains of new and gigantic species of (P. Fittoni and P. Sedgwickii), by Prof. Owen, 1858, 98.
Pterodactyles of the chalk-formation, J. S. Bowerbank on the, 1851, 55.

Pterodactyles of the coprolite-bed near Cambridge, Rev. J. B. P. Dennis on the mode of flight of the, 1860, 76.
Pteronura Sambachii, notice of, 1837, 100.
Pterotheca, a new genus of Silurian fossils, J. W. Salter on, 1852, 61; P. transversa and P. corrugata, 61.
Pterygotus, great, of Scotland, J. W. Salter on the, 1856, 75.
—— and Pterygotus beds of Great Britain, D. Page on the, 1855, 89.
Ptychodus latissimus, Prof. Owen on the structure of the tooth of, 1838, 140.
Puccinium graminis, notice of, 1841, 73.
Pulley, locomotive differential, J. I. Hawkins on the, 1833, 424.
Pulleys, expanding, Mr. Coombe on, 1858, 209.
Pulmogrades, J. Price on the embryogeny of, 1846, 86.
Pulmonifera, terrestrial, Prof. E. Forbes on the distribution of, in Europe, 1838, 112.
Pulse, differential, Sir J. Murray on the, 1835, 98.
Pulvermacher's patent portable hydro-electric chain battery, W. H. Walenn on the construction and principles of, 1851, 52.
Pump, on the bucket of a, in use in Sweden, 1838, 159.
——, centrifugal, J. G. Appold on a, 1849, 110.
——, centrifugal, and windmill, for drainage and irrigation, 1855, 210.
——, for drawing up water by the power of a jet, Prof. J. Thomson on a, 1852, 130.
——, jet, on apparatus constructed to determine the efficiency of the, with results, by Prof. J. Thomson, 1853, 130.
——, "Treffos," J. Williams on the, 1837, 129.
—— and steam-engine, on two combinations of the, for raising water, 1858, 208.
Pumping water, steam-engine for, 1833, 421.
Pumps, centrifugal, Prof. J. Thomson on some properties of whirling fluids, with their application in improving the action of, 1852, 130.
Purbecks, Dorsetshire, Prof. E. Forbes on the succession of strata and distribution of organic remains in the, 1850, 79.
Purkinje's experiment on the eye, Sir D. Brewster and Prof. Wheatstone on, 1831–32, 551.
Purple dye obtained from coal-tar, W. H. Perkin on the, 1858, 58.
Purpura hæmorrhagica, T. S. Wells on a case of, 1845, 85.
Purpura lapillus, C. W. Peach on the nidus and growth of the, 1842, 66.
—— lapillus, Dr. W. B. Carpenter on the development of the embryo of, 1854, 108.
Purpurate of ammonia, Prof. Gregory on a new process for preparing, 1840, 74.
Pycnogonidæ, on a form of parasitism among the, by Prof. Allman, 1859, 143.
Pycnonotus chrysorrhœus, shot near Waterford, 1843, 71.
Pylorus: Prof. Retzius on the Antrum pylori in man and animals, 1855, 132.
Pyramids, H. Perigal on the probable mode of constructing the, 1844, 103.
Pyrites, artificial, containing cubical and octahedral crystals, 1834, 582.
——, iron, crystals of, 1836, 77.
——, iron, A. Gages on some transformations of, in connexion with organic remains, 1860, 79.
——, yellow copper, on the torrefaction of, 1831–32, 78.
Pyroacetic spirit, Dr. Kane on compounds obtained from, 1837, 52.
Pyrosclerite, Connemara, analysis of, by Prof. Rowney, 1860, 71.
Pyroxylic spirit, M. Scanlan on a fluid obtained in manufacturing, 1835, 40.
—— spirit, Dr. Dalton's analysis of, 1835, 44.

Quadratic radicals, Prof. Sylvester on a generalization of Poncelet's theorems for the linear representation of, 1860, 7.
Quadrumana: Prof. Owen on the anthropoid apes, 1854, 111.
Quantities, imaginary, on conjugate functions as tending to illustrate the doctrine of, by Sir W. R. Hamilton, 1834, 519.
Quarries, granite, of Dartmoor, W. Johnson on the, 1841, 105.
Quartz, J. M°Cullagh on the laws of double refraction in, 1836, 18.
——, auriferous, Dr. J. Blake on the comparative richness of, extracted at different depths from the same lode, 1853, 50.
——, crystals of, within mica, amethyst, and topaz, Sir D. Brewster on, 1853, 3.
Quartzite, gneiss, and red sandstone in the north-west Highlands, Prof. Nicol on the relations of the, 1859, 119.
Quaternions, Sir W. R. Hamilton on a theory of, 1844, 2.
——, Sir W. R. Hamilton on a system of, 1845, 3.
——, on an extension of, by Sir W. R. Hamilton, 1854, 1.
——, on an application of, to the geometry of Fresnel's wave-surface, by Sir W. R. Hamilton, 1859, 243.
Quetelet's (Prof.) investigations relating to the electricity of the atmosphere, Prof. Wheatstone on, 1849, 11.
Quinine, V. Hurtado on the barks from which it is obtained, 1860, 162.
——, Prof. Stokes on the optical properties of a recently discovered salt of, 1852, 15.

Radclyffe observatory, E. J. Dent on the mean daily rate of the transit-clock in the, 1839, 28.
'Radesyge,' of Scandinavia, Dr. Hancock on the disease called, 1837, 128.
Radiata, hydroid: on the reproductive organs

of Sertularia tamarisca, by Prof. Allman, 1858, 119.
Radiation, Rev. Prof. Powell on experiments relative to the influence of surfaces on, 1837, 20.
——, solar, A. Claudet on different properties of the, in producing or preventing a deposit of mercury on silver plates, 1847, 35.
——, solar, on the constancy of, by Prof. P. Smyth, 1856, 28.
Raia chagrinea, notice of, 1838, 109.
—— intermedia, notice of, 1838, 109.
Railway accident, Versailles, J. Gray on the causes of the, 1844, 97.
—— accidents in this country and on the continent, F. G. P. Neison on, 1853, 109.
—— accidents by collision, Rev. Dr. Scoresby on, 1853, 125; Rev. F. F. Statham on, 129.
——, atmospheric, C. Vignoles on, 1842, 100.
——, atmospheric, Kingstown and Dublin line, 1843, 101.
——, atmospheric, on the elastic malleable iron tube, as a means of developing the principle of propulsion on an, 1847, 132.
——, atmospheric, on a new low-pressure, by W. P. Struvé, 1848, 120.
——, high level, for the Liverpool Docks, J. Grantham on a, 1854, 151.
—— with cast-iron sleepers, T. Motley on the construction of a, 1838, 157.
——, safety rotation, Mr. Hawkins on the, 1840, 196.
—— axles, J. Nasmyth on the strength of, 1842, 105.
—— balance lock, G. Remington on a, 1837, 129.
—— break, new, notice of a, 1854, 157.
—— carriages: on gas carriages for lighting with coal-gas instead of oil, by G. Hart, 1859, 235.
—— chairs and compressed wood fastenings, C. May on, 1851, 114.
—— foundations, T. Parkin on, 1839, 132.
—— gradients, W. Fairbairn on, 1845, 93.
—— gradients, C. Vignoles on, 1840, 193.
—— sections between Bristol and Bath, W. Sanders on, 1841, 67.
—— sections on the line of the Great Western Railway between Bristol and Taunton, W. Sanders on, 1846, 59, 61.
—— sections of the oolitic formations on the Great Western Railway at Sapperton tunnel, by Capt. Ibbetson, 1846, 61.
—— sections between Glasgow and Greenock, and Greenock and Ayr, by J. Craig, 1841, 67.
—— signal, new, Dr. Gray on a, 1857, 185.
—— signals, Capt. Norton on, 1854, 158.
—— signals, C. F. Whitworth on, 1858, 223.
—— signals and breaks, W. S. Ward on, 1848, 121.
—— trains, Dr. Lardner on the resistance of, 1837, 132.
—— trains, J. S. Russell on the resistance of, 1844, 96.
Railway trains at high velocities, J. S. Russell on the law which governs the resistance to motion of, 1846, 109.
—— trains, M. Ricardo on a machine for registering the velocity of, 1846, 114.
—— tunnels, W. West on the ventilation of, 1837, 136.
—— wheel, G. Cottam on a new iron, 1839, 128.
—— wheel with wood tyre, Mr. Dircks on a, 1840, 212.
—— wheels, wooden, T. Parkin on a new construction of, 1839, 131.
—— (proposed) from the Atlantic to the Pacific, in the territories of British North America, A. Doull on a, 1851, 111.
—— from the Atlantic to the Pacific ocean, through the British possessions of North America, A. Whitney on the formation of a, 1858, 154.
Railways, Dr. Lardner on their effect on intercommunication, 1836, 150.
——, W. Fairbairn on, 1858, 202.
——, British, on the financial prospects of, by S. Brown, 1858, 172.
—— and their varieties, W. B. Adams on, 1855, 202.
——, J. Price on a method of constructing, 1838, 158.
——, C. Vignoles on their economy in respect of gradients, 1840, 193.
——, C. Vignoles on the best form of rails and upper works of, 1842, 106.
——, D. Mushet on the quality of iron for, 1837, 134.
——: on the construction of timber viaducts, 1838, 150.
——, Dr. Lardner on an apparatus for use in working, 1839, 129.
——, Capt. Denham on the vibration of, 1835, 108.
——, G. Heaton on the oscillation of locomotive engines on, 1849, 116.
——: improved method of working the valves of a locomotive engine, 1838, 160.
——: Mr. Hawthorn on improvements in locomotive boilers, 1840, 211.
——: Mr. Grime on wrought-iron wheels for locomotive engines, 1840, 212.
——: C. Vignoles on straight axles for locomotives, 1842, 104.
——, J. Barton on the permanent way of, 1852, 122.
——, J. Godwin on an improved cast-iron sleeper for, 1852, 127.
——, on a new method of constructing the permanent way and wheels of, by W. B. Adams, 1858, 203.
——: on a new step rail, 1840, 212.
——: notice of M. Bergeron's method of instantaneously casting loose the locomotive engine, 1842, 114.
——, on an electric semaphore for use on, by W. S. Ward, 1853, 131.
——, on the use of percussion lights for

preventing collisions on, by Capt. Leach, 1857, 181.
Railways: on a plan for giving alarms in passenger trains, by J. O'Neill, 1858, 219.
——, street, as used in the United States, G. F. Train on, 1860, 215.
——, wooden, W. Bridges on, 1844, 97.
—— in America, 1837, 135.
—— in Ireland, abstract of the Report of the Commissioners on, 1838, 171.
Rain, Prof. Stevelly on the origin of, 1834, 565.
——, G. A. Rowell on the formation of, 1840, 47.
——, evaporation, and the winds of temperate regions, G. A. Rowell on the cause of, 1847, 41.
—— in the temperate zones, Prof. Dove on the distribution of, 1854, 28.
——, Dr. W. Smith on the variations in the quantity of, which falls in different parts of the earth, 1838, 27.
——, on the variation in the quantity of, due to the moon's position in reference to the plane of the earth's orbit, by C. Fulbrook, 1857, 29.
——, Prof. Forbes on excessive falls of, 1840, 43.
——, L. Howard on the difference of the quantity of, at different heights, 1834, 563.
——, Prof. Bache on the quantity of, collected at different heights, 1838, 25.
—— : readings of mountain gauges, by J. F. Miller, 1846, 21.
——, Sir T. M. Brisbane on an apparent anomaly in the measure of, 1834, 560.
—— at the Albion mines, Nova Scotia, Col. Sykes on, 1854, 39.
—— at Arbroath, A. Brown on the fall of, 1855, 30.
—— in the Lake districts of Cumberland and Westmoreland, &c., table of the fall of, by J. F. Miller, 1846, 18.
—— at Demerara, on the fall of, by P. Sandeman, 1859, 52.
—— in Forfarshire, on the fall of, by A. Brown, 1859, 47.
—— at Harraby, near Carlisle, J. Atkinson on, 1841, 30.
——, on the fall of, at Hull, by W. Lawton, 1853, 31.
—— in Ireland, on the amount of, 1852, 28, 29.
—— in the south-west of Ireland, and in Suffolk, Rev. T. Knox and Rev. H. Knox on the quantity of, 1843, 22.
——, with the different winds, at Toomavara, co. Limerick, during five consecutive years, Rev. T. Knox on the amount of, 1845, 17.
—— at Florence Court, Enniskillen, and Belfast, a comparison of the, by W. Thompson, 1844, 14.
——, Col. Sykes on the prodigious fall of, at Mahabuleshwar and along the Ghats of Western India, 1839, 15.
Rain on the coast of Travancore and table-land of Uttree, India, Col. Sykes on the fall of, from observations of General Cullen, 1846, 22.
——, on the fall of, on the table-land of Uttree Mullay, Travancore, by Col. Sykes, 1848, 39.
——, experiments to determine the fall of, at different heights below 200 feet, in the island of Bombay, 1852, 25.
——, Prof. Phillips's experiments on the quantities of, falling at different elevations at York, 1833, 401.
——, W. Gray, jun., and Prof. Phillips on the quantities of, falling at different elevations at York, 1834, 560.
——, Prof. Phillips's experimental researches on, 1840, 45.
—— at York and Harraby, Prof. Phillips on, 1841, 30.
——, Prof. Phillips on the quantities of, received at unequal elevations upon the ground, 1844, 21.
Rain-fall of London and its vicinity, on the position of the moon with reference to the plane of the earth's orbit in its connexion with the, by C. Fulbrook, 1857, 29.
——, on some simultaneous observations of, at different points on the same mountain range, by Prof. W. J. M. Rankine, 1854, 46.
Rain-falls for a series of years at home and in foreign countries, P. L. Simmonds on, 1855, 45.
Rainbow, remarkable, Mr. Bowman on a, 1840, 12.
——, explanation of the, by the Abbé Raillard, 1857, 35.
—— after actual sunset, Rev. Prof. Chevallier on a, 1849, 16.
—— seen after sunset, Rev. Prof. Chevallier on a, 1855, 38.
——, lunar, account of a, by J. K. Watts, 1851, 41.
Rainbows, remarkable, Rev. J. Fisher on, 1840, 12.
Rain-gauge and anemometer, new registering, F. Osler on a, 1837, 33.
——, Prof. Bache on the effect of deflected currents of air on the quantity of rain collected by a, 1838, 25.
—— erected at Plymouth by the British Association, 1839, 17.
——, new, for determining the direction in which rain comes, and the angle of inclination at which it descends, Prof. Phillips on a, 1840, 46.
——, improved, Mr. Thom on an, 1840, 210.
——, new, J. Johnston on a, 1840, 211.
Rain-water, on the methods of estimating the amounts of ammonia and nitric acid in, by J. B. Lawes and Dr. J. H. Gilbert, 1854, 70, 164.
Raptores, J. Hogg on the classification of the, 1846, 77.
Rarefaction, artificial, Sir James Murray on

its influence in some diseases, and effects of condensation in others, 1835, 96.
Rasores, J. Hogg on the classification of the, 1846, 78.
Rat, jerboa, new species of, 1841, 70.
Rats, pouched, Sir J. Richardson on the, 1838, 105.
Rays, converging, on an instance of, by J. J. Murphy, 1857, 35.
Reaping-machinery, A. Crosskill on, 1853, 114; 1858, 209.
Rectilinear motion, Rev. Dr. Booth on a method of converting, into rotatory, 1845, 94.
Redstart, black, Dr. M. Barry on a singular locality chosen for its nest, 1852, 71.
Reefing topsails, Cunningham's plan for, 1854, 150.
Reflecting circle, J. C. Dennis on improvements in the, 1848, 117.
—— instrument for use at sea, Prof. C. P. Smyth on an improved form of, 1852, 12.
Reflexion, Prof. Lindelöf on the caustics produced by, 1860, 14.
——, crystalline, Sir D. Brewster on, 1842, 13.
——, metallic, Rev. Dr. Lloyd on the phenomena of, 1843, 6.
——, metallic, Prof. Stokes on, 1850, 19.
——, total, Prof. MacCullagh on the theory of, 1843, 4.
—— and refraction at the surface of crystals, Prof. MacCullagh on the laws of, 1835, 7.
Reformatories for juvenile offenders, T. B. L. Baker on, 1856, 128.
Reformatory institutions, origin and progress of, by J. M'Clelland, 1855, 179.
—— schools, Glasgow, on juvenile delinquency, its principal causes and proposed cure, as adopted in the, by Rev. A. K. M'Callum, 1855, 173.
—— schools, on the position of, in reference to the State, and their management, by Mary Carpenter, 1856, 134.
Refraction, note on, by Col. Sir H. James, 1858, 38.
——, on various phenomena of, through semi-lenses, producing anomalies in the illusion of stereoscopic images, by A. Claudet, 1856, 9.
—— of heat, Prof. Powell on the, 1841, 25.
—— of Iceland spar, Sir D. Brewster on the, 1843, 7; and remarks on, by Prof. MacCullagh, 7.
—— of light beyond the critical angle, Prof. Stokes on the, 1848, 5.
—— of transparent media included between two parallel faces, Dr. F. Bernard on indices of the, 1854, 2.
——, atmospheric, M. Moggridge on two cases of uncommon, 1848, 33.
——, conical, Rev. Dr. Lloyd on, 1833, 370.
——, double, in quartz, Prof. MacCullagh on the laws of, 1836, 18.
——, double, on a new species of, by Sir D. Brewster, 1859, 10.
Refraction, solar, Prof. C. P. Smyth on, 1855, 29.
—— and reflexion at the surface of crystals, Prof. MacCullagh on the laws of, 1835, 7.
Refractive indices, Rev. Prof. Powell on the theoretical computation of, 1841, 24.
—— indices of several substances, Rev. Prof. Powell on the, 1850, 14.
—— index and volume among liquids, on the relation between, by Rev. T. P. Dale and Dr. J. H. Gladstone, 1859, 12.
—— power of minute bodies, A. Bryson on an instrument for measuring the, 1840, 87.
Refractometer, portable, 1854, 2.
Refrigeration, Dr. Osborne on a mode of measuring, 1835, 94.
Reindeer, antler of a, found near Southwold, 1851, 69.
——, J. S. Traill on the laryngeal sac of the, 1834, 623.
Remopleurides dorsospinifer (Silurian fossil), J. W. Salter on, 1852, 60.
Reptiles, Prof. Owen on the teeth of, 1838, 144.
——, flying, on the geological distribution of, by Prof. Owen, 1858, 97.
Reptilian remains from the neighbourhood of Elgin, Prof. Huxley on the, 1859, 261.
Repulsion excited between surfaces at minute distances by the action of heat, Rev. Prof. Powell on, 1834, 549.
——, electrical, Sir W. S. Harris on, 1836, 19.
—— and attraction, Rev. T. Exley on the alternate spheres of, 1844, 39.
Resin of gamboge, and its compounds, Prof. J. F. W. Johnston on the, 1838, 60.
—— of sarcocolla, Prof. J. F. W. Johnston on the, 1840, 83.
Resins, Prof. J. F. W. Johnston on, 1840, 82.
Resistance of fluids, J. S. Russell on a new law of the, 1834, 531.
Respiration, Dr. Holland on its influence on the circulatory system, 1837, 104.
——, Dr. Reid on the amount of air required for, 1838, 131.
——, B. W. Richardson on the process of, 1860, 143.
—— of deteriorated atmospheres, C. T. Costhupe on the, 1839, 108.
——, artificial, Dr. Dalziel on apparatus for promoting, 1838, 127.
——, Dr. Spittal on the cause of the sounds of, 1838, 122.
——, on the sounds produced in, by Dr. Blakiston, 1839, 99.
——, on the mechanism of, in the family of Echinidæ, by Dr. T. Williams, 1856, 101.
Rete mucosum and Pigmentum nigrum, R. M. Glover on their functions in the dark races of mankind, 1838, 125.
Retina, Sir D. Brewster on the compensation of impressions moving over the, as seen in railway travelling, 1848, 47.
——, Sir D. Brewster on the visual impressions upon the foramen centrale of the, 1848, 48.

Retina, Dr. A. Waller on the luminous spectra excited by pressure on the, and their application to the diagnosis of the affections of the retina and its appendages, 1848, 82.
——, on a case of vision without, by Sir D. Brewster, 1852, 3.
——, on the duration of luminous impressions on certain points of the, by Sir D. Brewster, 1858, 6.
——, on vision through the foramen centrale of the, by Sir D. Brewster, 1858, 7.
——, on its structure at the punctum centrale, 1858, 141.
Retzius (Prof.), measurements of a skull considered to be Burgundian, 1848, 96.
——, notes on a Kirgis skull, 1848, 96.
Rhætians, Dr. W. Freund on the, 1854, 126.
Rheumatism, Dr. T. Thomson on the value of opium as a remedy in, 1841, 78.
——, chronic, R. Adams on the bones in, 1836, 123.
Rhinanthus crista-galli, J. Clarke on the parasitic character of, 1848, 84.
Rhododendron ponticum, Prof. Henslow on crystals of sugar in, 1836, 106.
Rhynchonella psittacea, L. Barrett on, 1855, 107.
Rhynchonellidæ, A. Hancock on the anatomy of the, 1856, 94.
Rhynchosaurus, Rev. W. Lister on footprints of the, in the new red sandstone north of Wolverhampton, 1860, 87.
Ricinus communis, Dr. M'William on its use as a means to excite lactation, 1850, 132.
Riffers of Morocco, E. Schlagintweit on the, 1860, 177.
Rifle, Minie, W. Fairbairn on the, 1852, 125.
Rifles and other fire-arms, C. T. Coathupe on an improved sight for, 1841, 104.
——, on the application of telescope sights to, by Prof. C. P. Smyth, 1850, 188.
Rifle-shells and balls, J. Gall on a new kind of, 1855, 206.
Rings seen in viewing a light through fibrous specimens of calc-spar, G. J. Stoney on, 1860, 19.
Rivers, J. F. Bateman on a self-acting waste weir and scouring sluice, 1842, 110.
——, G. W. Featherstonhaugh on the excavation of the rocky channels of, by the recession of their cataracts, 1844, 45.
——, Dr. L. Becker on the constant increase of elevation of beds of, 1850, 72.
——, Rev. Dr. Hitchcock on erosions of the earth's surface by, 1850, 85.
——, on the causes of the excess of the mean temperature of, above that of the atmosphere, 1852, 30.
—— of Abessinia, on the, 1846, 71.
—— in India, on erosion of, by H. and R. Schlagintweit, 1857, 90.
——, tidal, J. S. Russell on improvements in, 1837, 131.
——, tidal, on the advantages arising from the improvement of, as exemplified by the Clyde, 1857, 167.
Road locomotives, Earl of Caithness on, 1860, 204.
Roads, macadamized, for streets of large towns, J. P. Smith on, 1849, 129.
—— and streets, J. I. Hawkins on paving them with wood, 1839, 127.
Robertson's patent chain propeller, P. Spence on, 1859, 243.
Robinson's (R.) new reaping machine, 1852, 129.
"Roches moutonnées" in the Lake district of Westmoreland, J. Bryce on, 1850, 76, 112.
Rock, phosphorite, in Spanish Estremadura, Prof. Daubeny on the, 1844, 28.
——, recently-formed, on the coast of Flanders, Dr. T. L. Phipson on the composition of a, 1859, 77.
——, upper Ludlow, Rev. W. S. Symonds on a phyllopod crustacean in the, 1855, 98.
Rock-blasting, Dr. Hare on a calorimotor for, 1836, 45.
Rocks, on the blasting and quarrying of, by W. Sim, 1855, 209.
——, basaltic and metamorphic, Prof. T. Andrews on the microscopic structure of, and the occurrence of metallic iron in them, 1852, 34.
——, calcareous, of Yorkshire, on the, 1831–32, 56.
——, Cambrian, of the Longmynd, Shropshire, J. W. Salter on some fossils from the, 1855, 95.
——, Cambrian, of Bray Head and Howth, Ireland, Prof. Kinahan on the zoological relations of the, 1857, 75.
——, crystalline, of the North Highlands, on the relations of the, to the old red sandstone of that region, and on the discovery of fossils in the former, by Sir R. I. Murchison, 1855, 85.
——, Devonian, in North Africa, Prof. E. Forbes on Dr. Overweg's discovery of, 1851, 58.
——, Devonian, in the south of Ireland, J. B. Jukes on, 1852, 51.
——, dolomitic, of the Tyrol, Dr. Daubeny on the disintegration of the, 1841, 48.
——, erratic, Prof. Phillips on the dispersion of, at higher levels than their parent rock in Yorkshire, 1853, 54.
——, gneiss, in the north of Scotland, Prof. J. Nicol on the age and relations of the, 1858, 96.
——, granite, W. Hopkins on the distribution of, from Ben Cruachan, 1851, 59.
——, granitic and transition, near Christiania, Norway, Sir C. Lyell on the, 1837, 67.
——, igneous, on the east flank of the Berwyn range, J. E. Bowman on a plateau of, 1840, 100.
——, igneous and sedimentary, of the lower

Silurian formation in North Wales, A. Dean on the stratification of, 1844, 56.
Rocks, igneous, on some peculiarities in the arrangement of the minerals in, by H. C. Sorby, 1858, 107.
——, igneous, T. S. Hunt on, 1860, 84.
——, igneous, interstratified with the carboniferous limestones of the basin of Limerick, J. B. Jukes on the, 1860, 84.
——, lower lias, on the evidence of a reef of, extending from Robin Hood's Bay to the neighbourhood of Flamborough Head, by Capt. Woodall, 1856, 80.
——, limestone, of Canada, Dr. G. D. Gibb on the caverns in the, 1859, 106.
——, magnesian, T. S. Hunt on, 1860, 83.
——, metamorphic, on a method of observation applied to the study of, and on molecular changes by the action of acids upon them, by A. Gages, 1858, 48.
——, metamorphic, of the north of Ireland, Prof. Harkness on the, 1860, 79.
——, metamorphic, in Scotland, Prof. E. Forbes on the foliation of the, 1854, 82.
——, metamorphic and igneous, of the Lake district, J. G. Marshall on the, 1858, 84.
——, on the relations of the metamorphic and older palæozoic, in Scotland, by D. Page, 1858, 105.
——, older, of the Highland Border, H. C. Sorby on the, 1855, 96.
——, palæozoic, Prof. Phillips on the occurrence of some minute fossil crustaceans in, 1841, 64.
——, palæozoic, of Britain, Rev. Prof. Sedgwick on the classification and nomenclature of the, 1853, 54.
——, palæozoic, of Germany, Sir R. I. Murchison on the, 1854, 87.
——, palæozoic, of Scandinavia and Russia, on the, 1844, 53.
——, palæozoic, of Scotland, D. Page on the subdivisions of the, 1854, 91.
——, palæozoic and metamorphic, of Scotland, D. Page on the subdivisions of the, 1855, 92.
——, palæozoic, North American and British, Prof. H. D. Darwin on the correlation of the, 1856, 175.
——, passage, and the old red sandstone of Herefordshire, on some fishes and tracks from the, by Rev. W. S. Symonds, 1859, 124.
——, plutonic, T. S. Hunt on the, 1860, 84.
——, quartz, crystalline limestones, and micaceous schists of the North-western Highlands of Scotland proved to be of lower Silurian age, by Sir R. I. Murchison, 1857, 82.
——, secondary, of Britain, Prof. Strickland on the results of researches into the fossil insects of the, 1845, 58.
——, lower sedimentary, of Cumberland, Prof. Harkness on the, 1857, 67.
——, lowest sedimentary, of Scotland, Prof. Harkness on the, 1855, 82.
Rocks, ancient sedimentary, of Ireland and Scotland, Prof. Harkness on some new fossils from the, 1856, 65.
——, schistose, J. B. Jukes on the metamorphic origin of, 1856, 68.
——, upper Silurian, of Denbighshire, J. E. Bowman on the, 1841, 59.
——, Silurian, of Bohemia, Sir R. I. Murchison on the, 1850, 97.
——, lower Silurian, discovery of microscopic shells in the, 1854, 82.
——, Silurian and metamorphic, of the south of Norway, D. Forbes on the relations of the, 1855, 82.
——, old slate, of the north of Devonshire, classification of the, by Prof. Sedgwick and Sir R. I. Murchison, 1836, 95.
——, slate, J. P. Norton on their composition and the soils formed from them, 1845, 38.
——, J. Leithart on the stratification of, 1838, 88.
——, stratified, Prof. J. Phillips on certain movements in the, 1843, 60.
——, stratified, on the connexion of the granite with the, in Aberdeenshire, by T. F. Jamieson, 1859, 114.
——, Sir R. I. Murchison on the distinction between the striated surface of, and parallel undulations dependent on original structure, 1842, 53.
——, striated and polished, and "Roches moutonnées" in the Lake district of Westmoreland, J. Bryce on, 1850, 76, 112.
——, striated, and other evidences of ice-action in the north of Scotland, Prof. J. Nicol on, 1855, 88.
——, tertiary, in the islands stretching from Java to Timor, J. B. Jukes on the, 1846, 67.
——, trap or igneous, General Portlock on the manner in which they intrude into the sandstone and conglomerate of North Berwick, 1850, 101.
——, trap, of Scotland, A. Geikie on the chronology of the, 1859, 106.
——, upper Ludlow, and the base of the old red sandstone, Sir R. I. Murchison on the bone-beds of the, 1856, 70.
——, volcanic, in Italy, which appear to have been subjected to metamorphic action, Dr. Daubeny on the, 1859, 102.
—— of North America, Prof. H. D. Rogers on the, 1848, 74.
—— of Barbados, Sir R. H. Schomburgk on the, 1847, 70.
—— of South Devon and Cornwall, Rev. D. Williams on the, 1839, 62.
—— of Connemara, Ireland, on the existence of phosphoric acid in certain, by Dr. Daubeny, 1855, 56.
—— of the Dingle Promontory, co. Kerry, J. B. Jukes and G. V. Du Noyer on the, 1857, 71.
—— occurring between the Girdleness and

Dunnottar Castle, Kincardineshire, Rev. Dr. Longmuir on the, 1859, 261.
Rocks of Lundy Island, Rev. D. Williams on the, 1843, 57.
—— of the Penine chain, J. B. Jukes on the position of the, 1838, 79.
—— of the Upper Punjaub, Sir R. I. Murchison on the researches of Dr. Fleming on the, 1852, 43.
—— of South Wales, J. B. Jukes on the, 1857, 73.
——: Rev. Prof. Sedgwick on the geological structure and relations of the frontier chain of Scotland, 1850, 103.
——, scratched and polished, of Scotland, Sir R. I. Murchison on the, 1851, 66.
——, older, of the Highland Border, on the structure and mutual relationships of the, by H. C. Sorby, 1855, 96.
——, some results of researches among the older, of the Highlands of Scotland, by Sir R. I. Murchison, 1858, 94.
—— in the vicinity of Aberdeen and the north-east of Scotland, Prof. Nicol on the, 1859, 116.
—— in the vicinity of Stromness, notice of the natural printing of sea-weeds on the, 1856, 90.
—— of Spain, Sir R. I. Murchison on the, 1850, 108; primary, 108; palæozoic, 108; secondary, 110; tertiary, 111.
——: on the Yorkshire flagstones and their fossils, by W. Baines, 1858, 78.
——, non-metalliferous joints in, and mineral veins, Prof. Phillips on the relations of, 1834, 654.
——, culm and plant, in the neighbourhood of Exeter, fossils of the, 1840, 103.
——, copper-bearing, of Lake Superior and Huron, W. E. Logan on the age of the, 1851, 58.
——, Prof. J. F. W. Johnston on a chemical cause of change in the composition of, 1853, 52.
——, on an indirect method of ascertaining the presence of phosphoric acid in, by Dr. Daubeny, 1855, 55.
——, on the jointing of, by Prof. Harkness, 1856, 65.
—— at or below the base of the carboniferous series of Ireland, Sir R. Griffith on the relations of the, 1857, 66.
——, on the jointed structure of, by Prof. W. King, 1858, 83.
——, on some phenomena at the junction of the granite and schistose rocks in West Cumberland, by Prof. Phillips, 1858, 106.
——, on the currents present during the deposition of the carboniferous and Permian strata in South Yorkshire and North Derbyshire, by H. C. Sorby, 1858, 108.
——, on the origin of "cone-in-cone," by H. C. Sorby, 1859, 124.
——, minerals, &c., Prof. Rogers on the decomposition and partial solubility of, by pure water and water charged with carbonic acid, 1849, 40.
Rocks and minerals, various, on a method of determining the temperature and pressure at which they were formed, by H. C. Sorby, 1858, 107.
—— and minerals in the property of the Marquis of Breadalbane, C. G. Thost on the, 1859, 125.
"Rolled stones," on the time required for the formation of, by M. Moggridge, 1856, 69.
Roman camp at Ardoch, and the military works near it, Col. Sir H. James on the, 1859, 183.
—— colonization in Lancashire, Dr. Black on traces of, 1845, 80.
Root-principle in the cultivation of trees, N. Niven on the importance of understanding the, 1857, 98.
Roots of substitutions, Rev. T. Kirkman on the, 1860, 4.
Rope, wire, on the origin of, its qualities, and economy, by A. Smith, 1854, 162.
Ropes, wire, for deep mines, 1838, 150.
Rosa sempervirens, Prof. Phillips on the colour-stripes of, 1848, 86.
Rosse (Earl of) on plain specula of silver for reflecting telescopes, 1851, 12.
Rotation, on an instrument to illustrate Poinsôt's theory of, by Prof. J. C. Maxwell, 1856, 27.
——, J. S. S. Glennie on a general law of, applied to the planets, 1860, 58.
Rotatory motion, Rev. Dr. Booth on a new method of converting rectilinear into, 1845, 94.
Rottenstone of Derbyshire, Prof. Johnston on the, 1853, 52.
Round towers of Ireland, G. M. Hills on the, 1857, 133.
Royal Geographical Society, notice of Capt. MacConnochie's account of the origin and progress of that institution, 1834, 666.
Rubiaceæ, on the stipular glands of, by G. Lawson, 1854, 99.
Rudder, duplex, and screw propeller, Capt. Carpenter on the, 1851, 110.
Ruhmkorff's (M.) new electro-medical apparatus, 1859, 62.
Ruminants, J. Goodsir on the follicular stage of dentition in the, 1839, 82.
Rupture of the duodenum, Sir D. J. H. Dickson on the, 1839, 94.
Russian produce, the effect of the war, in Russia and England, upon the principal articles of, by R. Valpy, 1855, 195.
—— trade with Central Asia, F. Mitchell on the, 1859, 186.
Rust and mildew, produced by the same fungus, 1841, 73.

Sabella alveolata, C. S. Bate on, 1849, 73.
Saccharine fermentation within the female breast, Dr. G. D. Gibb on, 1860, 131.
—— solutions and other liquids, on a

pan for evaporating, by R. Davis, 1859, 230.
Sacrum in man, H. Carlile on the structure of the, 1837, 112.
Safety-cage for miners, R. Aytoun on a, 1859, 228.
Safety-lamp, new, Baron Eugène de Menil on a, 1839, 64.
——, Clegg's, 1840, 210.
Safety-lamps, on, 1835, 55, 56.
Safety-valve, improved, J. Nasmyth on an, 1851, 115.
——, compound, description of the, by J. Hopkinson, 1858, 212.
Sagitta, Prof. Huxley on the genus, 1851, 77.
Sagittarii (R.), a new variable star, N. Pogson on, 1858, 29.
Saliculous and spiroilous acid, Dr. Ettling on the identity of, 1840, 78.
Saline solutions, their action on silicates under heat and pressure, 1857, 59.
Salmon, on the natural history of the, by Dr. R. Knox, 1831–32, 595.
——, some remarks on the, by Prof. R. Jones, 1839, 93.
—— fry, J. Wilson on the, 1840, 133.
——, Dr. Lizars on the organs of sense in the, 1840, 134.
——, J. Hogg on the artificial breeding of, in the Swale, 1853, 68.
—— fisheries, Prof. R. Jones on the, 1839, 93.
—— stair, Mr. Smith on a, 1840, 136.
Salmonidæ of the north-west of Sutherlandshire, Sir W. Jardine on the, 1834, 613.
——, Prof. Agassiz on the different species of, which frequent the rivers and lakes of Europe, 1834, 617.
——, Clupeadæ, and Coregoni, Dr. Knox on the natural and economic history of certain species of the, 1846, 79.
Salt, and other saline bodies, W. Bollaert on the distribution of, with a view to show their primary origin and subsequent formations, 1852, 101.
——, on masses of, discovered in the lowest portions of guano on the island of Ichaboe, 1845, 39.
——, on the effects of, on vegetation, by Dr. A. Voelcker, 1850, 114.
—— as a poison to plants, W. B. Randall on, 1848, 58.
——, new, from iodine and caustic soda, Prof. Penny on a, 1840, 80.
—— of quinine, Prof. Stokes on the optical properties of a, 1852, 15.
Salt-field, Northwich, G. W. Ormerod on the extent of the, 1846, 62.
Salt-meat dietary, R. Galloway on the use of phosphate of potash in a, 1855, 63.
Salt-mine of Cardona, Dr. Traill on the, 1837, 72.
Salt spring, on a remarkable, 1838, 28.
Salts, Drs. Joule and Playfair on the expansion of, 1846, 49.
Salts, on the expansion of, by Prof. F. C. Calvert, 1858, 46.
——, on the constitution of, by Prof. W. A. Williamson, 1851, 54.
——, on the solubility of, at high temperatures, by Prof. W. K. Sullivan, 1857, 59.
—— and their acid solvents, on reciprocal decomposition between, by Dr. J. H. Gladstone, 1858, 50.
—— in solution, Dr. J. H. Gladstone on the colour of, 1857, 8.
——, ammoniacal, Dr. J. H. Gladstone on their decomposition by heat, 1857, 48.
——, double, formed with bichromate of potash, Prof. W. K. Sullivan on some, 1858, 66.
——, haloid, in solution, Dr. G. Wilson's experimental demonstration of the existence of, 1839, 41.
——, hydrated, Prof. Graham on, 1834, 579.
——, urinary, Sir J. Murray on the disordered conditions of the human body caused by, 1837, 106.
—— for rendering fibrous substances non-inflammable, on the comparative value of, by F. Versmann and Dr. Oppenheim, 1859, 86.
—— and oxides, on a symmetrical arrangement of, on a common type, by Dr. L. Playfair, 1859, 259.
—— of gold, new, Rev. J. B. Reade on, 1847, 57.
—— of lead, Dr. A. T. Thomson on the poisonous properties of the, 1831–32, 604.
—— of mercury, W. West on, 1838, 72.
—— of nicotin, Prof. E. Davy on, 1835, 39.
—— of sulpho-methylic acid, Dr. R. Kane on the, 1835, 42.
—— of zinc and copper, on the action of sulphuretted hydrogen on, by Prof. F. C. Calvert, 1855, 51.
—— present in the Cheltenham and other mineral waters, Dr. J. H. Gladstone on the, 1856, 51.
Salvia verbenaca, on the spiral vessels observed in the mucous matter which envelopes the seeds of, by W. Baxter, 1831–32, 605.
Samoieds, description of a family of, by J. V. Giles, 1852, 84.
Sand containing recent marine shells, on the summit of a granite hill on the coast of Mayo, Sir R. Griffith on a bed of, 1843, 50.
Sandpipes in the chalk near Norwich, Sir C. Lyell on the origin of, 1839, 65.
Sandstone of the neighbourhood of Cambridge, Rev. Prof. Sedgwick on the, 1845, 41.
—— (Bunter) of Dumfriesshire, Prof. Harkness on the position of the footsteps in the, 1850, 83.
——, Dura Den, and fossils, Rev. Dr. Anderson on the, 1859, 97.
——, granitic, of North Staffordshire, R.

Garner on an economical use of the, 1839, 77.
Sandstone, Keuper, discovery of beds of, containing zoophytes, in the vicinity of Leicester, by J. Plant, 1849, 64.
—— and conglomerate near North Berwick, Col. Portlock on the manner in which trap or igneous rocks intrude into the, 1850, 101.
—— of Warwickshire, Dr. G. Lloyd on some organic remains of Saurians and Sauroid fishes in the, 1839, 73.
—— of the Vale of Solway, J. A. Knipe on the, 1840, 98.
——, red, of the Tweed and Carlisle, N. Wood on the, 1838, 78.
——, red, gneiss, and quartzite in the North-west Highlands, Prof. Nicol on the relations of the, 1859, 119.
——, new red, of Worcestershire, J. Yates on fossil vegetables from the, 1837, 59.
——, new red, Prof. Hitchcock on foot-impressions in the, 1837, 60.
——, new red, of England and Ireland, Col. Portlock on the, 1837, 88.
——, new red, of Grinshill Hill, Shropshire, Dr. O. Ward on the footprints and ripple-marks of, 1839, 75.
——, new red, J. S. Dawes on the occurrence of vegetable remains, supposed to be marine, in the, 1842, 47.
——, new red, quarry at Lymm, Mr. Hawkshaw on the fossil footsteps in the, 1842, 56.
——, new red, the coal-measures, and the Silurian rocks of the South Staffordshire coal-field, J. B. Jukes on the relations between the, 1849, 55.
——, new red, Dr. G. Lloyd on a new species of Labyrinthodon from the, 1849, 56.
——, new red, Prof. H. E. Strickland on pseudomorphous crystals in, 1853, 61.
——, new red, north of Wolverhampton, Rev. W. Lister on some footprints of the Labyrinthodon, Rhynchosaurus, &c. in the, 1860, 87.
——, old and new red, of Ireland, Sir R. Griffith on the, 1852, 47, 48.
——, old red, and the formations beneath it, Sir R. I. Murchison on the, 1834, 652.
——, old red, on traces of a fossil reptile (Sauropus primævus) in the, by I. Lea, 1849, 56, 134.
——, old red, discovery of rippled surfaces and trails of animals in the, by Rev. T. T. Lewis, 1854, 91.
——, old red, base of the, and the upper Ludlow rock, Sir R. I. Murchison on the bone-beds of the, 1856, 70.
——, old red, of Berwickshire, D. Milne on the, 1834, 626.
——, old red, of Caithness, on new fossils from the, by J. Miller, 1859, 115.
——, old red, of Caithness, C. W. Peach on a fossil fish new to the, 1859, 120.
——, old red, of the Dingle Promontory, co. Kerry, J. B. Jukes and G. V. Du Noyer on the, 1857, 70.
Sandstone, old red, of Farnell, Forfarshire, Sir P. de M. G. Egerton on the fossil fishes found in the, 1860, 77.
——, lower old red, of Forfarshire, on new fossils from the, by H. Mitchell, 1859, 116.
——, old red, of Herefordshire, on a new species of Eurypterus from the, by Rev. W. S. Symonds, 1857, 93.
——, old red, of Herefordshire, on some fishes and tracks from the, by Rev. W. S. Symonds, 1859, 124.
——, old red, of Ireland, Sir R. Griffith on the, 1843, 46.
——, old red, of the North Highlands, on the relations of the crystalline rocks of that region to the, by Sir R. I. Murchison, 1855, 85.
——, old red, of the northern counties of Scotland, Sir R. I. Murchison on the fishes of the, 1840, 99.
——, old red, of the north of Scotland, Prof. M'Coy on the structure of certain fossil fishes of the, 1852, 55.
——, old red, of South Wales, J. B. Jukes on the, 1857, 73.
——, lower old red, of Scotland, Hugh Miller on the fossils of the, 1850, 91.
——, upper old red, at Kiltorkan Hill, co. Kilkenny, on a new fossil fern from the, and on the fish-remains and other associated fossils, by W. H. Baily, 1859, 98.
——, yellow, of Dura Den, Fifeshire, Rev. Dr. Anderson on the, 1850, 70; 1858, 74.
——, yellow, of Elgin and Lossiemouth, Prof. Harkness on the, 1859, 109.
——, yellow, of Ireland, Sir R. Griffith on the, 1840, 110; 1843, 42.
——, yellow, of the south of Ireland, Prof. E. Forbes on the fossils of the, 1852, 43.
Sand-storms and lacustrine beds, Rev. Mr. Schoolcraft on the production of, 1842, 42.
Sanitary and industrial economy of the borough of Leeds, R. Baker on the, 1858, 164.
—— inquiry and social economy, on the territorial distribution of the population for purposes of, by H. W. Rumsey, 1856, 151.
—— statistics of workhouses and charitable institutions, aphoristic notes on the, by Dr. Roth, 1856, 149.
Santalum album, Prof. Henfrey on the embryogeny of, 1856, 86.
Sao hirsuta (a species of Trilobite), on the 1849, 58.
Sapperton tunnel, on three sections of the oolitic formation at the west end of, by Capt. Ibbetson, 1846, 61.
Sarcocolla resin, Prof. J. F. W. Johnston on, 1840, 83.
Sardinian and Sicilian languages, J. Hogg on the, 1850, 140.
Saturn's rings, on an Instrument for exhibiting the motions of, by Prof. J. C. Maxwell, 1859, 62.
Saurians, fossil, Dr. R. Harlan on new species of, 1833, 440.

Saurians and Sauroid fishes, Dr. G. Lloyd on organic remains of, in the sandstone of Warwickshire, 1839, 73, 75.
——, Thecodontosaurus and Palæosaurus, W. Sanders on the age of the, 1849, 65.
—— found near Bristol, Dr. Riley and S. Stutchbury on an additional species of, 1836, 90.
Sauroid fishes, Sir D. Brewster on the fossil teeth of, 1838, 90.
Sauropus primævus, I. Lea on traces of the, found in the old red sandstone, 1849, 56, 134.
Savings-banks, J. W. Woollgar on the financial economy of, 1844, 92.
—— in the United Kingdom, G. R. Porter's sketch of the history of, 1845, 87.
——, Prof. W. N. Hancock on the duties of the public in respect to, 1851, 103.
—— and Friendly Societies, on the investments of the industrial classes in, by Dr. J. Bateman, 1858, 168.
—— and Assurance Offices, Sir J. F. Forbes on, 1859, 209.
Saxicava rugosa, W. Walker on the geological changes produced by the, in Plymouth Sound and in the limestone hills around Plymouth, 1841, 66.
Saxifraga geum, Prof. Allman on a monstrosity occurring in, 1845, 72.
Saxifrages, Irish, Mr. Mackay on the, 1843, 78.
——, Robertsonian, Dr. T. Andrews on the Irish species of the, 1845, 74.
Saxton's locomotive differential pulley, J. I. Hawkins on the principle of, 1833, 424.
—— locomotive differential pulley, notice of, 1835, 112.
Scalaria Ehrenbergi, 1847, 72.
Scantlometer, J. Wylson on the, 1844, 99.
Scarlatina increased and aggravated by the want of ventilation, Rev. T. Rankin on, 1847, 95.
Scelidotherium leptocephalum, a megatherioid quadruped from La Plata, Prof. Owen on the, 1856, 73.
Scheutz's calculating machine, 1855, 203.
Schist, Posidonian, amidst trappean beds in the Isle of Man, Rev. J. G. Cumming on, 1845, 60.
Schönbein's osone, F. De Moleyns on the nature and properties of, 1841, 57.
Schools, educational: E. Chadwick on the physiological as well as psychological limits to mental labour, 1860, 185.
—— for children of the poorer classes, statistics of the attendance in, by J. Fletcher, 1851, 99.
——, infant industrial, of Tuscany, E. Mayer on the, 1843, 93.
——, moral training, for large towns, D. Stow on, 1855, 191.
——, Willingdon Agricultural, 1843, 94.
——, reformatory, on the position of, in reference to the State, by Mary Carpenter, 1856, 134.
Sciatica, Dr. Newbiggin on the influence of Croton oil in, 1840, 156.
Science and works of art, on the influence of discoveries in, in developing the condition of a people, by J. C. G. Kennedy, 1851, 108.
Scirrhoma and peritonitis, Sir D. J. H. Dickson on a case of, 1839, 95.
Sclerotic plates in fishes, T. West on the occurrence of, 1844, 63.
Screw propeller, Fisher's Venetian, J. Grantham on, 1854, 151.
—— propeller and duplex rudder, Capt. Carpenter on the, 1851, 110.
—— propellers, experiments to determine the resistances of, when revolving in water, at different depths and velocities, by G. Rennie, 1855, 209; 1856, 169; 1857, 189.
Sculpture, Mr. Cheverton on the production of busts, &c. by machinery, 1835, 112.
Scyllæa, A. Hancock and Dr. Embleton on the anatomy of, 1847, 77.
Scyllium, a species of, taken on the Yorkshire coast, 1838, 107.
Sea, R. Edmonds on extraordinary oscillations of the, 1845, 20.
——, on the luminosity of the, 1849, 80, 81.
——, on altitude-observations at, by Prof. C. P. Smyth, 1855, 29.
——, on anemometrical observations at, by Prof. C. P. Smyth, 1855, 45.
——, notice of meteorological observations made at, 1857, 28.
——, on the use of percussion lights for preventing collisions at, 1857, 181.
——, North Polar, Dr. R. King on the Fish River of the, 1844, 58.
Seas, British, Prof. E. Forbes on some animals new to the, 1844, 64.
——, deep, J. P. Joule on a method of sounding in, 1851, 22.
Sea-barrier, buoyant, Capt. Sleigh on a, 1843, 102.
Sea-beach, raised, at Woodspring-hill, near Bristol, W. Sanders on a, 1840, 102.
Sea-beaches, ancient, and terraces, Rev. Dr. E. Hitchcock on, 1850, 87.
Sea-cliffs, ancient, and needles in the chalk of the valley of the Seine, in Normandy, Sir C. Lyell on, 1840, 111.
Sea-level, R. A. C. Godwin-Austen on recent changes of, 1850, 71.
——, on the existence of forces capable of changing the, during different geological epochs, by Prof. Hennessy, 1857, 69.
Sea-pink, on the composition of the ash of, and on the geographical distribution of that plant, and the presence of fluorine in plants, by Dr. Scoffern, 1849, 43.
Sea pressure-gauge, deep-, H. Johnson on a, 1859, 236.
Sea-sand, on the amount of, removed in a year from Youghal, Cork, and Kinsale harbours, by F. Jennings, 1843, 51.
Sea-sickness and its prevention, J. Atkinson on, 1851, 75.

Sea-urchins of Orkney and Shetland, Prof. E. Forbes and J. Goodsir on the, 1839, 80.
Sea walls and embankments, J. S. Russell on the construction of, 1830, 133.
Sea-water, and the effects of variation in its currents, Prof. Forchhammer on, 1846, 51.
——, Dr. G. Wilson on the presence of fluorine in, 1849, 47.
——, on preserving the balance between vegetable and animal organisms in, by R. Warington, 1853, 72.
——, Dr. G. Wilson on the artificial preparation of, for marine vivaria, 1854, 77.
——, on the influence of coloured glass on the growth of plants in, by R. Warington, 1854, 103.
——, experiments to prevent corrosion by, by E. Davy, 1835, 34, 36.
——, its corrosive action on copper, by Dr. J. Percy, 1849, 39.
—— and springs, Dr. Daubeny on the geological inferences to be deduced from the chemical constitution of, 1831–32, 592.
Sea-weeds, E. G. Schweitzer on the analysis of, 1845, 37.
——, notice of the natural printing of, on the rocks in the vicinity of Stromness, by C. W. Peach, 1856, 90.
Seal, skeleton of a, from the pleistocene clays of Stratheden, Fifeshire, D. Page on the, 1858, 103.
Sectors, coloured, rapidly revolving, Prof. Stevelly on the occasional distinct vision of, 1850, 21.
Seeds, Prof. E. Solly on the influence of galvanic electricity on the germination of, 1845, 69.
——, R. Hunt on a method of accelerating the germination of, 1853, 63.
——, on the action of light on the germination of, by Dr. Daubeny, 1855, 56.
——, exposed to a temperature of 198° below zero of Fahrenheit's scale, not losing the power of germination, Prof. Wartmann on, 1860, 110.
Semaphore, electric, for use on railways, W. S. Ward on an, 1853, 131.
Semitic inscriptions, Rev. Dr. E. Hincks on, 1860, 156.
—— language, Rev. Dr. E. Hincks on the, 1857, 134.
—— and Indo-Germanic languages, Rev. Prof. Jarrett on the, 1847, 122.
Sensation, Dr. Fowler on the relation of, to the higher mental processes, 1846, 92.
Senses, on the organs of the, and on the mental perceptive faculties connected with them, by W. E. C. Nourse, 1859, 171.
Sensibility, muscular, G. H. Lewes on, 1859, 167.
Sepia, fossil, in the lias of Gloucestershire, Prof. Buckman on remains of the, 1848, 66.
Sepiadæ, colossal, Col. H. Smith on the, 1841, 73.
Sepiola, Prof. E. Forbes on a species of, new to Britain, 1852, 73.
Serpents, on the fascinating power of, by J. Braid, 1855, 120.
Sertularia, J. G. Dalyell on the propagation of, 1834, 601.
—— tamarisca, on the reproductive organs of, by Prof. Allman, 1858, 119.
Sertulariadæ, Prof. Allman on the meduscoid structure in the reproductive gemmæ of the, 1852, 70.
Sertularian zoophytes from Port Natal, Algoa Bay, and Table Bay, in South Africa, G. Busk on, 1850, 118.
—— zoophytes, Prof. Wyville Thomson on the character of the, 1852, 78.
Sewerage of manufacturing towns, Dr. F. Wrightson on the, 1854, 77.
Sewers and cesspools, on the alkaline emanations from, by Dr. W. Odling, 1856, 57.
Sewing-machines, on their effects on production, prices, and wages, in Glasgow, by Dr. J. Strang, 1858, 198.
Shark, on the vitreous humour of the eye of a, by Sir J. F. W. Herschel, 1838, 15.
——, great, of the red crag, J. S. Bowerbank on the probable dimensions of the, 1851, 54.
Shea butter-tree growing in Africa, J. F. Duncan on the, 1846, 90.
Sheet-metal moulding machine, R. Roberts on the, 1849, 126.
Shell-bed, marine, of the South Wales coal-basin, G. B. Bevan on the, 1858, 80.
Shell-structure in some species of Pecten, Dr. Dickie on the, 1859, 147.
Shell of Cardium edule (common cockle), Dr. T. L. Phipson on the composition of the, 1859, 77.
Shells, Dr. W. B. Carpenter on the microscopic structure of, 1843, 71.
—— of the Azores and St. Helena, Prof. E. Forbes on the, 1851, 76.
——, British, Dr. J. E. Gray on Neara, a new genus of, 1838, 110.
——, British, rare and recent, 1848, 71.
—— found in the alluvial deposits of Belfast, J. Grainger on the, 1852, 74.
—— of the river Conway, R. Garner on the, 1856, 92.
—— from Mazatlan, P. P. Carpenter on, 1854, 107.
—— of the genus Conus, Sir C. Lyell on two species of, in the lias or inferior oolite of Caen, Normandy, 1840, 110.
—— of the newer pleiocene deposits, J. Smith on, 1838, 87.
——, new, J. Smith on, 1837, 100.
——, land and freshwater, found near Nottingham, E. J. Lowe on the, 1851, 80.
——, land, freshwater, and marine, obtained in sinking a well on the banks of the Avon, notice of, by P. P. Carpenter, 1854, 78.
——, marine, discovered in diluvial drift, J. Trimmer on, 1838, 86.
——, recent marine, in a bed of sand on the summit of a granite hill on the coast of Mayo, Sir R. Griffith on, 1843, 50.

Shells, marine, in the gravels of Ireland, T. Oldham on the, 1844, 57.
——, marine, in the deposits about Preston, Sir R. I. Murchison on the, 1831–32, 82.
——, marine, at considerable elevations near Preston, 1834, 654.
——, marine, found in gravel near Worcester, J. Allies on, 1839, 70.
——, marine, from the banks of the Severn, near Worcester, J. Buckman on, 1847, 62.
—— of mollusca, Dr. J. E. Gray on the angular lines on, 1838, 111.
——, microscopic, in the lower Silurian rocks, on the discovery of, by Prof. Ehrenberg, 1854, 82.
——, on their liability to injury from the growth of a fungus, by Rev. H. H. Higgins, 1858, 128.
——, pathological collection of, Rev. H. H. Higgins on a, 1860, 116.
Ship, atmotic, Hon. W. Bland on an, 1860, 60.
Ship's motion, method of making allowance for the effect of the, upon the observed velocity and direction of the wind, by J. Welsh, 1856, 38.
Ships, J. S. Russell on a new form for the construction of, 1835, 107.
——, descriptive measurement for tonnage of, by A. Henderson, 1854, 155.
——, Admiral Moorsom on the want of facts respecting their performance at sea, 1857, 187.
——, iron, on placing compasses on board, by Capt. E. J. Johnson, 1852, 10.
——, iron, Rev. Dr. Scoresby on the compasses of, 1854, 49, 53.
——, iron, J. T. Towson on the compasses of, 1854, 55.
——, iron, on the magnetism of, and its changes, by Rev. Dr. Scoresby, 1855, 12.
——, iron, on changes of deviation of the compass in, by "heeling," by J. T. Towson, 1859, 28.
——, iron, on the principles and measures on which safety in the navigation of, may be reasonably looked for, by Rev. Dr. Scoresby, 1854, 53, 161.
—— cased with iron plates, G. Rennie on, 1858, 220.
——, iron-built, Dr. J. H. Gladstone on the corrosion of, by sugar cargoes, 1853, 41.
——, early methods of propelling, by J. Macgregor, 1857, 182.
——, steam-, M. W. Ruthven on propelling and navigating, 1850, 186.
——, screw, on the manœuvring of, by Admiral Paris, 1859, 240.
——, on mooring, in revolving gales, by Col. Reid, 1851, 36.
——, R. Rawson on the oscillations of, 1849, 5.
——, on preventing the dangers from collision and fire in, by Mr. Williams, 1837, 133.
——: on percussion lights for preventing collisions at sea, by Capt. Leach, 1857, 181.
Ships: on the loss of the "Tayleur," by Rev. Dr. Scoresby, 1854, 49.
——, on the Gresham buoy for recording the loss of, by J. Oldham, 1858, 219.
——, sunken, A. Deane's method of raising, 1843, 101.
——, on a marine mortar for destroying, by J. Nasmyth, 1854, 158.
——, on some extraordinary effects of lightning on, by Rev. Dr. Scoresby, 1831–32, 567.
——: Capt. Carpenter on the duplex rudder and screw propeller, 1851, 110.
——: on Capt. Couch's chock channels, 1841, 102.
——: on the origin of wire rope, its qualities and economy, by A. Smith, 1854, 162.
——: J. Prideaux on the causes of the destructibility of modern copper sheathing, 1841, 43.
——, on the ventilation of, by J. Cunningham, 1854, 148.
——: on Cunningham's plan for reefing topsails, 1854, 150.
——: Dr. J. Phipps on the sailing powers of two yachts built on the wave principle, 1846, 112.
——, clipper, A. Henderson on, 1854, 152.
Ships' bottoms, Baron C. Wetterstedt on a varnish for preserving, from oxidation, decomposition, and injury by marine deposits and incrustations, 1847, 60.
Ship-building in Great Britain, G. Harvey on, 1831–32, 607.
——, J. Owen on, 1833, 430.
——, H. Chatfield on, 1836, 129.
——, Mr. Lang on improvements in, 1838, 157.
——, on the philosophy of the wave-line system of, by T. Moy, 1857, 188.
——, W. Fairbairn on the strength of iron, and its application as a substitute for wood in, 1840, 201.
——, iron, W. Simons on improvements in, 1860, 212.
Ship-canal through the Isthmus of Suez, on the proposed, by Dr. Hodgkin, 1857, 199.
Ship-communicator, on a new plan for a, by Dr. Sibbald, 1856, 164.
Ship-worms, J. G. Jeffreys on the British, 1860, 117.
Shipwrecks, notice of Dennett's rockets, 1840, 214.
——: on a wreck intelligencer, by R. Smith, 1858, 221.
Shower of grain, at Rajket, India, 1840, 44.
Shrew, square-tailed, Rev. L. Jenyns on the, 1838, 104.
Sicilian and Sardinian languages, J. Hogg on the, 1856, 140.
Sight, on the economy of artificial light for preserving, by J. I. Hawkins, 1844, 100.
Signals on railways, on a new arrangement for communicating, by W. S. Ward, 1848, 121.
——, sun, a hand heliostat for, by F. Galton, 1858, 15.

Signals, telegraphic time, by C. V. Walker, 1852, 131.
——, time, on the transmission of, by Prof. C. P. Smyth, 1855, 29.
Silica, J. Jeffreys on a hoar frost of, 1840, 125.
—— and alumina, Prof. Chapman on the isomorphous relations of, 1850, 50.
Silicates, on the action of saline solutions on, under the influence of heat and pressure, by Prof. W. K. Sullivan, 1857, 59.
——, metallic, on the action of sulphurets on, at high temperatures, by D. Forbes, 1855, 62.
——, soluble, and some of their applications, F. Ransome on, 1859, 78.
Siliceous deposits in the chalk formation, J. S. Bowerbank on the origin of the, 1856, 63.
Silicon from paracyanogen, Dr. Brown's experiments on the production of, 1841, 54.
—— in meteoric iron, Dr. C. U. Shepard on the existence of, 1839, 55.
Silk, W. Felkin on an experiment on the growth of, at Nottingham, 1839, 87.
——, W. Felkin on its cultivation in Hindostan, 1839, 88.
——, on the growth of, in England, by Mrs. Whitby, 1846, 87; 1849, 81.
——, on machinery for spinning, from the cocoon, by B. A. Murray, 1857, 189.
—— manufacture of Ireland, Dr. W. C. Taylor on the, 1843, 89.
Silk-trees, or Bombaceæ, of Western India, on some peculiarities of the, by Dr. G. Buist, 1859, 132.
Silkworm, on the cultivation of the, in England, by Mrs. Whitby, 1844, 73.
——, on its occurrence in a wild state in this country, by Rev. F. F. Statham, 1858, 130.
Silurian anthracite of Cavan, Prof. Whitty on the, 1854, 95.
—— districts of Ireland, Sir R. Griffith on the, 1843, 46; 1844, 46.
—— fossils, J. W. Salter on the structure and relations of Cornulites and other allied, 1845, 57.
—— fossils, J. W. Salter on a few genera of, 1852, 59.
—— formation, upper, in the Vale of Llangollen, J. E. Bowman on the, 1840, 100.
—— formation, lower, in North Wales, on the stratification of the igneous and sedimentary rocks of the, by A. Dean, 1844, 56.
—— formation in the district of Wilsdruff, Saxony, Dr. Geinitz on the, 1860, 79.
—— limestone of Hay Head, Staffordshire, Prof. Buckman on the age of the, 1846, 61.
—— and metamorphic rocks of the south of Norway, on the relations of the, by D. Forbes, 1855, 82.
—— rocks of Bohemia, Sir R. I. Murchison on the, 1850, 97; Trilobites of, 99.
—— rocks in the vicinity of Builth, Sir H. T. De la Beche on a section through the, 1844, 46.
—— rocks of Ireland, Sir R. Griffith on the, 1852, 47.
Silurian rocks in the county of Tyrone, Col. Portlock on the, 1838, 84.
—— rocks at Ober and Neu Schmollen, near Breslau, Silesia, F. Oswald on the, with remarks by Sir R. I. Murchison, 1845, 47.
—— rocks of Russia, Sir R. I. Murchison on the, 1840, 106.
—— rocks, the new red sandstone, and the coal-measures of the South Staffordshire coal-field, J. B. Jukes on the relations between the, 1849, 55.
—— rocks in Westmoreland, J. G. Marshall on a section across the, 1839, 67.
—— rocks, lower, of Scandinavia and Russia, Sir R. I. Murchison on the, 1844, 53.
—— rocks, lower, of the south of Scotland, Prof. Harkness on the fossil remains of the, 1852, 48.
—— rocks, lower, discovery of microscopic shells in the, 1854, 82.
—— rocks, lower, of the North-western Highlands of Scotland, Sir R. I. Murchison on the, 1857, 82.
—— rocks, lower and upper, of Canada, J. W. Salter on the fossils of the, 1851, 63.
—— rocks, upper, of Denbighshire, J. E. Bowman on the, 1841, 59.
—— schists, lower, A. Gages on the transformation of iron pyrites connected with fossil graptolites from Tinnaglough, co. Wexford, 1860, 79.
—— strata, upper, Prof. Buckman on the discovery of a new species of Hypanthocrinite in the, 1846, 61.
—— and Cambrian systems, Rev. Prof. Sedgwick and Sir R. I. Murchison on the, 1835, 59.
—— system of strata, Sir R. I. Murchison on the, 1838, 80.
—— system, Sir R. I. Murchison on the fishes of the upper beds of the, 1837, 91.
Silurio-Devonian strata of Scotland, on the palæontology of the, by D. Page, 1858, 104.
Silver, its price of late years does not afford an accurate measure of the value of gold, by Prof. R. H. Walsh, 1855, 198.
——, on the export of, to the East, by Prof. R. H. Walsh, 1856, 161.
——, new process for its extraction from lead, by H. L. Pattinson, 1838, 50.
—— ores, on the theory and practice of amalgamation of, in Mexico and Peru, by J. C. Bowring, 1844, 28.
——, ammonio-iodide of, Rev. J. B. Reade on, 1857, 56.
——, crystals of, T. E. Blackwall on the production of, 1838, 74.
——, iodide of, R. Hunt on the influence of the ferrocyanate of potash on the, as a photographic preparation, 1841, 47.
——, molybdic, notice of, 1841, 58.
——, nitrate of, blackened by light, R. Scanlan on, 1838, 63.
——, nitrate of, as a caustic and therapeutic agent, Dr. R. D. Thomson on, 1838, 132.
Sinapis cheiranthus, Koch, new to the English flora, 1839, 92.

Siphonotreta, on the genus, with description of a new species (S.? anglica), by J. Morris, 1849, 57.
Sirene, water, description of the, by Prof. Donaldson, 1850, 174.
Skeleton, on the homology of the, by G. M. Humphry, 1858, 126.
Skin, Dr. A. T. Thomson on Porrigo rodens, a pustular disease of the, 1841, 77.
Skull, measurements of a, considered to be Burgundian, by Prof. Retzius, 1848, 96.
——, Kirgis, notes on a, by Prof. Retzius, 1848, 96.
——, human, from South Australia, which had been used as a drinking vessel, 1844, 77.
—— of Eugene Aram, Dr. Inglis on the, 1838, 125.
—— of a Manatee from Old Calabar, Dr. J. M'Bain on a, 1859, 150.
Skulls, on certain American, Celtic, Cimbric, Roman, and ancient British, by Prof. Retzius, 1849, 86.
——, human, in the ancient mounds of North America, Dr. Warren on, 1837, 108.
Slate, mica, of Ireland, Sir R. Griffith on the, 1852, 47.
——, Stonesfield, at Collyweston near Stamford, Rev. P. B. Brodie on the, 1850, 74.
Slates, Collyweston, on the position of the, by Capt. Ibbetson and J. Morris, 1847, 127.
—— of Downshire, on the discovery of Silurian fossils in the, by Dr. J. Bryce, 1859, 260.
——, black, of Menai Straits, &c., Prof. A. C. Ramsay on the geological position of the, 1850, 102.
——, Silurian, of Peebleshire, A. Bryson on a curious structure in the, 1854, 78.
Slate-rocks of Ballyrizora, in the co. of Cork, R. W. Townsend on refracted lines of cleavage seen in the, 1853, 61.
—— of the north of Devonshire, old, classification of the, by Prof. Sedgwick and Sir R. I. Murchison, 1836, 95.
——, J. P. Norton on the composition of, 1845, 38.
Slaty cleavage, on a model illustrative of, by Rev. Prof. Haughton, 1857, 69.
—— cleavage, H. C. Sorby on some facts connected with, 1857, 92.
Slave labour and free labour in the West Indies, Prof. Hancock on, 1852, 117.
Slavery in the United States of America and the cotton manufacture in the United Kingdom, on the connexion between, by J. T. Danson, 1856, 137.
Slavonic, Germanic, and Lithuanic populations, Dr. Latham on the original distribution of the, 1850, 141.
Sleep, Dr. Dalziel on, 1838, 127.
——, Dr. R. Fowler on the state of the mind during, 1852, 80.
Slickensides, J. Price on, 1859, 123.
Sliding-rule, J. Bateman on the, 1841, 42.
—— for hygrometrical calculations, J. Welsh on a, 1851, 42.
Slonimski's (M.) calculating instrument, 1849, 118.
Sluice, scouring, and waste weir, J. F. Bateman on a self-acting, 1842, 110.
Small-pox, Dr. Inglis on the cause of the increase of, 1839, 104.
——: on the new vaccine virus of 1838, by J. B. Estlin, 1839, 105.
—— matter, notice of Mr. Ceely's experiments on, 1839, 106.
—— and vaccination, statistics of, in the United Kingdom, by Dr. W. Moore, 1859, 223.
Smelt, W. Yarrell on Osmerus hebridicus, a new species of, 1838, 108.
Smelting of iron with anthracite coal, G. Crane on the, 1837, 52.
—— of iron, J. S. Dawes on an improvement in the, 1838, 68.
Smithsonian Institution, Washington, P. P. Carpenter on the principles and working of the, 1860, 109.
Smoke, C. W. Williams on the prevention of, 1840, 199.
——, W. Fairbairn on combustion of coal and prevention of, 1842, 107.
——, C. W. Williams on several plans for abating the nuisances from, 1842, 108.
——, H. Dircks on the production and prevention of, 1843, 39.
——, H. Dircks on the prevention of, from engine boilers and other furnaces, 1843, 98.
——, J. Chanter on a furnace for preventing, 1843, 99.
——, J. Juckes's furnace for burning, 1842, 108; 1843, 99.
——, on the consumption of, in furnaces and manufacturing premises, by Rev. F. F. Statham, 1853, 127.
——, on the prevention of, by W. Fairbairn, 1854, 149.
——, on coal-burning without, by D. K. Clark, 1859, 230.
Snail's heart, on the beat of the, by Dr. M. Foster, 1859, 160.
Snails, Rev. T. Rankin on the hibernation of, 1846, 83.
Snake-nut tree, Sir R. Schomburgk on the, 1844, 71.
Snow, on a fresh form of crystallization in the particles of, under intense cold, by J. Wolley, 1858, 40.
——, red, Prof. Agassiz on animals found in, 1840, 143.
Snow-crystals, J. Glaisher on photogenic drawings of, 1854, 30.
Snow-storm, J. K. Watts on a, 1851, 41.
Soap, Prof. T. Thomson on the manufacture of, at Glasgow, 1840, 63.
Soaps, on the employment of Algæ and other plants in the manufacture of, by Chevalier Claussen, 1855, 103.
Soap-test, D. Campbell on its action upon water containing a salt of magnesia only, and upon water containing a salt of magnesia and a salt of lime, 1850, 49.

Societies, scientific and literary, A. Ryland on the income, &c. of, 1841, 95.
Society of Arts' Examinations, on some of the results of the, by J. B. Hennessy, 1858, 180; 1859, 214.
Soda, Prof. T. Andrews on the discovery of minute quantities of, by the action of polarized light, 1852, 33.
——, caustic, and iodine, Prof. F. Penny on a new salt obtained from, 1840, 80.
——, chloride of, Dr. Graves on its use in fever, 1835, 104.
——, phosphate of, H. H. Watson on the results of experiments on, 1836, 48.
——, phosphate and pyrophosphate of, H. H. Watson on the, 1836, 48.
—— or potash, hypochlorite of, on a method for determining the amount of available chlorine in, by Dr. A. P. Price, 1853, 48.
Soil, surface, Dr. Daubeny on the importance of ascertaining the minute portions of matter derived from organic sources that may be preserved in the, 1842, 37.
Soils, Prof. J. F. W. Johnston on the causes, physical and chemical, of the diversities of, 1853, 43.
Solanum tuberosum, Dr. Schiede on, 1835, 77.
Solar eclipse (1851), Prof. C. P. Smyth on the red prominences seen during the, 1852, 13.
—— eyepiece, H. Lawson on the arrangement of a, 1846, 9.
—— light, Prof. Daubeny on an apparatus for obtaining an estimate of the intensity of, 1839, 6.
—— radiation, A. Claudet on different properties of the, in producing or preventing a deposit of mercury on silver plates coated with iodine or its compounds, with chlorine and bromine, modified by coloured glass media and the vapours of the atmosphere, 1847, 35.
—— radiation, Prof. C. P. Smyth on the constancy of, 1856, 28.
—— rays, Sir J. F. W. Herschel on an instrument for measuring their heating power, 1833, 379.
—— rays, on the diminution of their intensity in traversing the atmosphere, by Prof. J. D. Forbes, 1833, 380.
—— rays, Rev. J. Cumming on an instrument for measuring the heating effect of the, 1833, 418.
—— rays, Sir J. F. W. Herschel on the chemical action of the, 1839, 9.
—— rays, R. Hunt on the chemical changes produced by the, 1845, 29.
—— refraction, Prof. C. P. Smyth on, 1855, 29.
—— spectrum, Sir D. Brewster on some experiments with the, 1837, 12.
—— spectrum, Sir D. Brewster on the structure of a part of the, hitherto unexamined, 1842, 15.
—— spectrum, on the law of the wavelengths corresponding to certain points in the, by M. Ponton, 1859, 20.
Solar spots, Prof. Henry on the heat of the, 1845, 6.
—— spots and faculæ, M. Chacornac on, 1854, 19.
—— time, on a means of determining the apparent, by the diurnal changes of the plane of polarization at the north pole of the sky, by Prof. Wheatstone, 1848, 10.
Solid of least resistance, J. S. Russell on the, 1835, 107.
Solidification of bodies under great pressure, W. Fairbairn on the, 1854, 149.
Solids, Prof. W. J. M. Rankine on the laws of the elasticity of, 2.
——, expansion of, by heat, R. Roberts on the, 1850, 16.
Solutions, dichromatic, Dr. J. H. Gladstone on some, 1856, 10.
——, saccharine, and other liquids, on a pan for evaporating, by R. Davis, 1859, 230.
Solvent power of acetates, J. Mercer, jun. on the, 1844, 32.
Sorex, Rev. L. Jenyns on certain species of, 1838, 104.
Sorodiscus rivularis (Alga), Prof. Allman on, 1846, 89.
Soukaneeah dialect of the Berber, Prof. W. F. Newman on the, 1850, 142.
Sound, on the mathematical theory of, by Rev. S. Earnshaw, 1858, 34.
——, J. Herapath on the velocity of, 1831–32, 559.
——, on the velocity of, in liquid and solid bodies of limited dimensions, especially along prismatic masses of liquid, by Prof. W. J. M. Rankine, 1851, 4.
——, Mr. Shand on the agency of, 1840, 52.
——, Dr. R. Kane on the interference of, 1835, 13.
——, J. S. Russell on certain effects produced on, by the rapid motion of the observer, 1848, 37.
——, on the effect of wind on the intensity of, by Prof. Stokes, 1857, 22.
——, Dr. D. B. Reid on the construction of public buildings in reference to, 1835, 14.
——, application of our knowledge of the laws of, to the construction of buildings, by J. S. Russell, 1843, 96.
——, Rev. S. Earnshaw on the triplicity of, 1860, 58.
—— of thunder, Rev. S. Earnshaw on the velocity of the, 1860, 58.
Sounds, simple and compound, Abbé Moigno on an instrument for registering, 1859, 62.
—— produced in respiration, Dr. Blakiston on the, 1839, 99.
Sounding, on an instrument for, by R. Barklay, 1855, 205.
—— in deep seas, J. P. Joule on a method of, 1851, 22.
Soundings, deep-sea, and errors therein from strata currents, with suggestions for

their investigation, by Rev. Dr. Scoresby, 1853, 22.
Spar, calcareous, Sir D. Brewster on the cause of the white rings seen round a luminous body when looked at through, 1844, 9.
Spasmodic diseases, Dr. R. D. Thomson on the use of hydrocyanic acid in, 1841, 54.
Species, Rev. L. Jenyns on the variation of, 1856, 101.
——, Prof. Draper on the intellectual development of Europe, considered with reference to the view of Mr. Darwin and others on, 1860, 115.
Spectacles, on the focal length of, by J. I. Hawkins, 1837, 132.
Spectra of various flames, Sir D. Brewster on the luminous bands in the, 1842, 15.
Spectral phenomena, apparatus for exhibiting optical illusions of, by H. Dircks, 1858, 14.
Spectrum, Rev. Prof. Challis on some facts relating to the composition of the colours of the, 1834, 544.
——, Prof. Powell's measures of the indices of refraction for the lines G and H in the, Sir D. Brewster on, 1840, 5.
——, Sir D. Brewster on a new property of the rays of the, 1842, 12.
——, on the determination of the wave-length corresponding with any point of the, by Prof. Stokes, 1849, 11.
——, Prof. Helmholtz on the homogeneous colours of the, 1853, 5.
——, Sir D. Brewster on the triple, 1855, 7.
——, on the mixture of the colours of the, by Prof. J. C. Maxwell, 1859, 15.
——, colours of the, Prof. J. C. Maxwell on an instrument for exhibiting any mixture of the, 1860, 16.
——, prismatic, Sir J. F. W. Herschel on a remarkable property of the extreme red rays of the, 1839, 9.
——, prismatic, Prof. W. A. Miller on the action of gases on the, 1845, 28.
——, prismatic, Rev. Prof. Powell on the bands formed by partial interception of the, 1846, 4.
——, solar, Sir D. Brewster on the structure of a part of the, hitherto unexamined, 1842, 15.
——, solar, Sir D. Brewster on the dark lines in the portion of the red space beyond the red extremity of the, as seen by Fraunhofer, 1847, 33.
——, solar, on the fixed lines of the, by Dr. J. H. Gladstone, 1858, 17.
——, solar, on the law of the wave-lengths corresponding to certain points in the, by M. Ponton, 1859, 20.
Specula of telescopes, Dr. R. Greene on polishing the, 1843, 11.
—— of silver for reflecting telescopes, Earl of Rosse on, 1851, 12.
—— of reflecting telescopes, J. D. Sollitt on the composition and figuring of the, 1853, 10.
Specula for reflecting telescopes and lenses, Dr. R. Greene on a machine for polishing, 1856, 24.
Speculum, large, W. Lassell on a method of supporting a, 1850, 180.
——, telescope, of silvered glass, L. Foucault on a, 1857, 6.
Speech by mechanical means, Prof. Wheatstone on, 1835, 14.
Spergula vulgaris, new to the English flora, notice of, 1839, 92.
Spermaceti, on the effect of pressure on the temperature of fusion of, by W. Hopkins, 1854, 58.
Spermatozoa, on the physiology of the, by Prof. Kölliker, 1855, 125
—— in Ascaris mystax, Prof. Allen Thomson on the, 1855, 138.
Sphærodus, Prof. Owen on the teeth of the extinct genus, 1838, 142.
Sphene, examination of, by T. Richardson, 1838, 49.
Sphenopteris Hookeri, a new fossil fern, from the upper old red sandstone formation at Kiltorkan Hill, co. of Kilkenny, W. H. Baily on, 1859, 98.
Sphere, on the geometrical projection of two-thirds of the surface of the, by Col. Sir H. James, 1858, 151.
Spheroid, rotating, on the conditions of equilibrium in a, by Dr. Siljeström, 1858, 5.
Spheroidal state of bodies, and its application to steam boilers, M. Boutigny on the, 1845, 27.
—— state, on the cause which maintains bodies in the, beyond the sphere of physico-chemical activity, by M. Boutigny, 1851, 44.
Spiders, J. Blackwall on the structure and functions of, 1833, 444.
——, J. Blackwall on the palpi of, 1842, 66.
——, J. Blackwall on a species of Ichneumon whose larva is parasitic on, 1842, 68.
——, British, notice of J. Blackwall's work on, 1860, 120.
Spina bifida, Mr. Evans on a case of, 1839, 101; Dr. Thurnam on a case of, 1845, 86.
Spinal chord, a sensational and volitional centre, by G. H. Lewes, 1858, 135.
Spine, S. Hare on the curvature of the, 1837, 114.
Spines, on some peculiar forms of, found in two species of spinigrade starfishes, by C. W. Peach, 1858, 128.
Spiræa ulmaria, Dr. Ettling on the oil of, 1840, 78.
Spirals, on an instrument for describing, by Rev. Dr. Booth, 1858, 207; 1860, 60.
Spirits, W. Black on a method of ascertaining the strength of, 1836, 61.
Spiroilous and saliculous acid, Dr. Ettling on the identity of, 1840, 78.
Spirometer, notice of a, 1858, 143.
Spirule or Ram's Horn (Cephalopod), on the formation of the shell of the, 1846, 82.

Spleen, on the supposed relation of the, to the origin of the coloured blood-corpuscle in the adult, by J. S. Sanderson, 1850, 134.
Sponge: Prof. H. E. Strickland on the mode of growth of Halichondria suberea, 1853, 72.
Sponge-like animal, Prof. Huxley on a new form of, 1851, 80.
Sponge, fossil (Choanites Königi), W. Cunnington on a peculiarity in the structure of, 1848, 67.
Sponges, fossil, on the curious spiral body in, 1853, 51.
Spring, remarkable, near Kissingen, Bavaria, notice of a, by Prof. J. D. Forbes, 1838, 28.
Springs, Dr. Lankester on deposits in, from the existence therein of infusoria, 1841, 72.
——, Artesian, on a new method of boring for, by M. Fauvelle, 1846, 105.
——, hot, of the Pyrenees, Prof. J. D. Forbes on the, 1836, 83.
——, mineral, and other waters of Yorkshire, W. West on the, 1844, 105.
——, thermal, of North America, Dr. Daubeny on the, 1838, 91.
—— in Hales Bay (Poole Harbour), notice of two, 1836, 94.
——, and sea-water, on the geological inferences to be deduced from the chemical constitution of, by Dr. Daubeny, 1831–32, 592.
Squinting, Dr. Butter on the pathology and cure of, 1841, 79, 80.
——, Dr. Ure on the operation for, 1840, 163.
St. Paul's Cathedral, the steps of, the produce of quarries at Poolvash in the Isle of Man, 1845, 60.
Stagonolepis Robertsoni, remains of, discovered in the neighbourhood of Elgin, Prof. Huxley on the, 1859, 261.
Stangeria paradoxa, J. Yates on, 1854, 104.
Star, graphical method of computing an occultation of a, by Rev. Prof. Chevallier, 1847, 7.
——, occultation of a, on the calculation of an, by Prof. Mossotti, 1855, 26.
——, binary, 70 Ophiuchi, W. S. Jacob on certain anomalies presented by the, 1855, 25.
—— (R. Sagittarii), new variable, N. Pogson on a, 1858, 29.
——, γ Virginis, Dr. J. Lee on the results of measurements of the, by Rear-Admiral Smyth, 1857, 32.
——, double, γ Virginis, on the results of the measures (for the epoch 1858) of the, by Dr. J. Lee, 1858, 29.
Stars, charts of the, Col. James on the geometrical projection of two-thirds of the sphere in the construction of, 1859, 183.
——, double, distance-measures of, with the ocular crystal micrometer, by N. Pogson, 1858, 22.
—— forming binary or multiple groups, Prof. J. D. Forbes on the alleged evidence for a physical connexion between, 1850, 23.
Stars, shooting, C. Gravier on, 1845, 20.
——, shooting, Rev. Prof. Powell on, 1847, 14.
——, shooting, Rev. Dr. Robinson on, 1848, 37.
——, shooting, Prof. H. Hennessy on the distribution of, in the interplanetary spaces, 1850, 24.
——, telescopic, observed at Markrea Castle, notice of, 1843, 18.
——, temporary, D. Vaughan on the light of, 1857, 42.
——, variable, R & S Ursæ Majoris, and U Geminorum, as observed consecutively for six years, by N. Pogson, 1859, 36.
——, variable, prospectus of the Hartwell Atlas of, by Dr. J. Lee, 1860, 36.
—— and nebulæ seen at the Cape of Good Hope, Sir J. F. W. Herschel on the, 1838, 17.
——, British Association Catalogue of, W. S. Jacob on the, 1854, 25.
Starch, W. C. Jones on the quantity of, in ordinary wheat, 1836, 74.
Starfishes of Orkney and Shetland, Prof. E. Forbes and J. Goodsir on the, 1839, 80.
——, palæozoic, on some new, compared with living forms, by J. W. Salter, 1856, 76.
——, spinigrade, on some peculiar forms of spines found on two species of the, by C. W. Peach, 1858, 128.
Station-marks, W. Petrie's results from experiments for determining the best sort of, 1850, 183.
Statistical Commission, central, in Brussels, M. Quetelet on the, 1841, 98.
—— desiderata, W. R. Greg on, 1836, 151.
—— inquiries, Mr. Hare on an outline for subjects for, 1838, 177.
—— tables, on the probability of uniformity in, by R. Campbell, 1859, 3.
Statistics: address by N. W. Senior at Oxford, 1860, 182.
—— and political economy, Prof. Lawson on the connexion between, 1843, 94.
——, vital, of Glasgow, Dr. Cowan on the, 1840, 173.
——, vital, of Scarborough, J. Dunn on the, 1840, 167.
—— of crime in England, F. G. P. Neison on the, 1846, 102.
Steam, W. J. Henwood on the expansive action of, in Cornish pumping-engines, 1837, 129.
——, W. West on heating by, 1844, 35.
——, Sir W. G. Armstrong on some phenomena attending the production of electricity by, 1845, 30.
——, J. T. Price on a method of condensing, in marine engines, 1851, 116.
—— at various temperatures, on the density of, by W. Fairbairn and T. Tate, 1859, 233.
——, combined, Hon. J. Weathered on, 1858, 222.
——, high-pressure, Sir W. G. Armstrong on the electricity of, 1843, 39.

Steam, saturated, W. Fairbairn on the density of, 1860, 210.
——, superheated, W. Fairbairn on the law of expansion of, 1860, 210.
——, unchanged, on, 1854, 159.
—— communication with the East Indies and North America, 1836, 130.
—— power, on the application of, to the drainage of marshes and fen lands, by J. Glynn, 1848, 117.
Steam-boilers, M. Boutigny on the spheroidal state of bodies, and its application to, 1845, 27.
——, W. Fairbairn on the application of machinery to the manufacture of, 1838, 160.
——, W. Greener on the construction of, 1838, 162.
——, W. Fairbairn on the construction of, 1851, 113.
——, Mr. Maule on a substitute for the forcing-pump in supplying, 1838, 163.
——, W. S. Ward on a method of supplying them with water, 1849, 132.
——, Mr. Gulline on safety-valves for, 1840, 213.
——, J. Nasmyth on an improved safety-valve for, 1851, 115.
——, on an improved compound safety-valve for, by J. Hopkinson, 1853, 119.
——, on a patent safety alarum for, by J. Hopkinson, 1853, 119.
——, on the cause of explosions of, and means of prevention, by J. Hopkinson, 1858, 212.
——, on the economical working of, 1854, 147, 149.
——, Mr. Lamb on preventing the incrustation of, 1846, 106.
——, Dr. J. Davy on the incrustation which forms in, 1850, 51.
Steam-engine boiler, J. Price on a, 1838, 162.
—— boiler, Mr. Player on the application of anthracite coal to the, 1839, 130.
—— boiler, J. Hopkinson on an improved, 1853, 120.
Steam-engine, new double-piston, J. G. Bodmer on a, 1844, 98.
——, double-cylinder expansion, J. Elder on a, 1858, 211.
——, new rotatory, S. Rowley on a, 1838, 162.
——, new rotatory, Mr. Gossage on a, 1839, 129; Rev. J. W. M'Gauley on a, 1849, 118.
——, vertical, notice of a, 1846, 113.
—— worked with three kinds of pressure, Mr. Shaw on a, 1842, 111.
—— (marine), J. S. Russell on the vacuum formed in the condenser of a, 1840, 186.
—— for pumping water, W. L. Wharton on a, 1833, 421.
——, immense, for draining the lake of Haarlem, notice of the, by J. Taylor, 1843, 100.
—— and pump, on two combinations of the, for raising water, W. E. Carrett on, 1858, 208.
Steam-engine indicator, Rous's, 1843, 101.
—— indicator, J. Hopkinson on the, 1853, 118.
Steam-engines, Mr. Ettrick on improvements in, 1835, 113.
——, on improvements in the mode of working, by T. Moy, 1857, 187.
—— in Cornwall, J. Taylor on the duty of, 1835, 108.
—— in Cornwall, J. S. Enys on the performance of, 1836, 130.
—— in Cornwall, J. S. Enys on the connexion which exists between improvements in pit-work and the duty of, 1841, 103.
Steam-fan for the ventilation of coal-mines, J. Nasmyth on a, 1851, 116.
Steam-hammer, Nasmyth's, for pile-driving, Dr. R. Greene on, 1845, 92.
——, new double-acting, W. Naylor on a, 1858, 218.
Steam navigation, J. S. Russell on the mechanism of waves in relation to, 1837, 130.
—— navigation in America, Rev. Dr. Scoresby on, 1844, 97.
—— navigation, on the progress of, with notice of the large ship of the Eastern Steam Navigation Company, by J. S. Russell, 1854, 160.
—— navigation, W. Fairbairn on, 1858, 201.
Steam-ploughs, B. Samuelson on, 1853, 122.
Steam-boats, Dr. Farquharson on the strongest form of, 1840, 191.
——, Rev. J. Brodie on a uniformly propelling wheel for, 1840, 190.
——, G. Rennie on their propulsion by the trapezium paddle-wheel and screw, 1841, 101.
——: W. Chatfield on Truscott's plan for reefing paddle-wheels, 1841, 101.
——, Capt. Taylor on a shield to protect the paddle-wheels of, 1841, 101.
——. J. Grantham on a plan of disengaging and reconnecting the paddle-wheels of, 1841, 102.
Steam-boat building on the Clyde, Dr. J. Strang on the progress and extent of, 1852, 120.
Steamship "Great Eastern," J. S. Russell on the mechanical structure of the, 1857, 195.
Steamers, ocean, A. Henderson on, 1854, 152.
—— and tow-boats for the Indian rivers, A. Henderson on, 1859, 235.
Steam tugs employed in the Aire and Calder navigation, W. H. Bartholomew on the, 1858, 205.
Steamships, iron, G. B. Airy on correcting the local magnetic action of the compass in, 1838, 21.
——, on applications of the wave principle to the practical construction of, by J. S. Russell, 1849, 30.
——, on improvements in propelling and navigating, by M. W. Ruthven, 1850, 186.

Steamships, J. S. Russell on an indicator of the speed of, 1842, 109.
——, on a cylindrical spiral boiler adapted to, by J. Elder, 1860, 204.
——, on double-cylinder expansion engines for, by J. Elder, 1858, 211.
——, on the performance of, the functions of the screw, and the relations of its diameter and pitch to the form of the vessel, by Admiral Moorsom, 1858, 215; 1859, 237.
——, G. Rennie on the application of the screw to the propulsion of, 1841, 101.
——: Capt. Carpenter on the duplex rudder and screw propeller, 1851, 110.
——: on the resistance of a screw when revolving in water at different depths and velocities, by G. Rennie, 1856, 169.
——, J. S. Russell on the temperature of most effective condensation in, 1840, 186.
——, J. S. Russell on the economical proportion of power to tonnage in, 1839, 124.
——, J. S. Russell on the economical and effective proportion of engine power to the tonnage of the hull in, 1840, 188.
——, Mr. Fleming's plan for the ventilation of, 1842, 110.
——, Mr. Wallace on extinguishing fire in, 1840, 194.
Stearine, effect of pressure on the temperature of fusion of, by W. Hopkins, 1854, 58.
Steel, W. Petrie on the physical properties which it should possess in the manufacture of magnets, 1846, 34.
——, J. Nasmyth on the chemical character of, 1848, 57.
——, hard, and cast iron, Rev. Dr. Scoresby on a new process of magnetic manipulation, with its effects on, 1844, 100.
——, malleable iron, and cast iron, Dr. C. Schafhaeutl on the combinations of the constituents of, 1839, 49.
——, on Dr. Gurlt's process for making and melting, by P. J. Worsley, 1856, 59.
——, Prof. W. J. M. Rankine on the strength of, 1859, 242.
——, in bridge-building, on the valuable properties of, by J. I. Hawkins, 1831–32, 608.
Stellaria umbrosa, Reich., new to the English flora, notice of, 1839, 92.
Stenops, Prof. Van der Hoeven on the genus Perodicticus of Bennett, and its relation to, 1850, 125.
—— Potto, Prof. Van der Hoeven on the anatomy of, 1860, 134.
Stephenson's tubular bridge for crossing the Menai Straits, W. Fairbairn's experiments on, 1846, 107; Prof. Hodgkinson's experiments on, 108.
Stereognathus ooliticus, a fossil mammal from the Stonesfield slate, 1854, 80; Prof. Owen on the, 1856, 73.
Stereoscope, Prof. Wheatstone on the, 1838, 16.
——, new, Sir D. Brewster on a, 1849, 6.
——, lenticular, notice of an early form of the, 1858, 19.
——, A. Claudet on the angle to be given to binocular photographic pictures for the, 1853, 4.
Stereoscopes, on producing the idea of distance in the, by J. Beck, 1859, 61.
——, A. Claudet on the means of increasing the angle of, to obtain an effect in proportion to their magnifying power, 1860, 61.
Stereoscopic cosmoramic lens, G. Knight on a, 1854, 70.
—— images, A. Claudet on various phenomena of refraction through semi-lenses, producing anomalies in the illusion of, 1856, 9.
—— phenomena, M. Dove on some, 1854, 9.
Stereoscopometer, A. Claudet on the, 1852, 6.
Sternoptixineæ, Dr. Handyside on the, 1838, 110.
Stethoscope, improved, Dr. Granville's, 1838, 129.
——, Dr. C. J. B. Williams on the, 1842, 75.
Stoke Prior engine, a new rotatory steam-engine, notice of the, 1839, 129.
Stomach: Dr. R. D. Thomson on the chemistry of the digestive organs, 1836, 117.
——, Dr. R. D. Thomson on the existence of free muriatic acid in the, 1839, 58.
——, Dr. Holland on the cause of death from a blow on the, 1837, 104.
Stone, A. J. Adie on its expansion by the application of heat, 1834, 569.
——, Prof. E. Hodgkinson on the strength and elasticity of, 1849, 116.
—— columns, Prof. E. Hodgkinson on the strength of, 1845, 26.
—— and crystalline bodies, Prof. E. Hodgkinson on the elasticity of, 1853, 36.
——, on the application of the soluble silicates for the preservation of, by F. Ransome, 1859, 78.
——, artificial, on the manufacture of, by F. Ransome, 1859, 78.
—— hatchets, Sir E. Belcher on their manufacture by the Esquimaux, 1860, 154.
Stones, rolled, found in the coal-seam of Cockfield Fell Colliery, H. T. M. Witham on, 1838, 79.
——, sculptured, of Scotland, J. Stuart on the, 1859, 197.
Stonesfield slate, J. F. Whiteaves on the fossils of the, 1860, 104.
Stork, gigantic, sculptured on the tomb of an officer of the household of Pharaoh, J. Bonomi on a, 1845, 63.
Storm, great, of January 6 & 7, 1839, A. F. Osler on the, 1839, 18.
——, remarkable, at Bombay, Col. Sykes on a, 1848, 41.
—— of hail, remarkable, R. Garner on a, 1856, 39.
Storms, J. P. Espy on, 1840, 30.

Storms, observations on, by R. Russell, 1851, 34.
——, Col. Reid on the law of, 1838, 21.
——, law of: Col. Reid on mooring ships in revolving gales, 1851, 36.
——, arrangements for communicating warning of, from one part of the country to another, Admiral FitzRoy on, 1860, 42.
——, Capt. W. Parker Snow on practical experience of Admiral FitzRoy's law of, in each quarter of the globe, 1860, 52.
——: on the Balaklava tempest, by T. Dobson, 1856, 36.
——, on the passage of, across the British Islands, by R. Russell, 1850, 42.
——, British, Admiral FitzRoy on, 1860, 39.
—— in England and Ireland, Dr. J. B. Nevins on, 1854, 30.
—— in India, Dr. G. Buist on, 1849, 15.
——, revolving, the general cause of great inundations in the countries forming the western seaboard of Europe, by T. Dobson, 1856, 31.
——, rotatory, on the theory of, by Dr. J. B. Nevins, 1854, 30.
——, tropical, Dr. J. Taylor on, 1852, 31.
—— and tornadoes, American, W. C. Redfield on, 1840, 40.
Stove, Arnott's, J. N. Hearder on, 1841, 105.
——, gas, W. Sykes Ward on a, 1850, 191.
Stoves, Dr. Arnott on a balanced valve regulator for, 1847, 47.
Stramonium, Sir D. Brewster on the dichroism of a solution of, in ether, 1842, 14.
Strata, Profs. H. D. and W. B. Rogers's theory of the flexure and elevation of, 1842, 41.
——, carboniferous and Permian, H. C. Sorby on the currents present during the deposition of the, 1858, 108.
—— and fossils of the coal formation of the west of Scotland, J. Craig on the, 1840, 89.
——, subcretaceous, Dr. Fitton on the arrangement and nomenclature of some of the, 1846, 58.
—— and organic remains of the Dorsetshire Purbecks, Prof. E. Forbes on the, 1850, 79.
——, Rev. J. Dingle on the corrugation of, in the vicinity of mountain-ranges, 1860, 77.
Stratification, Rev. Dr. Buckland on the mechanical action of animals on hard and soft substances during the progress of, 1845, 52.
Strength of cast iron, Prof. E. Hodgkinson on the, 1833, 423.
—— of materials, Prof. E. Hodgkinson on the, 1833, 421, 423.
—— of pillars of cast iron and other materials, Prof. E. Hodgkinson on the, 1840, 202.
—— of stone columns, Prof. E. Hodgkinson on the, 1845, 26.
Strikes, on the cause and consequences of the Preston strike in 1853 to 1854, by H. Ashworth, 1854, 130.
Strontium and barium, Dr. Hare on the preparations of, 1839, 36.
—— and calcium, prepared in the form of metallic reguli, by Dr. Matthiessen, 1855, 66.
Structures, Prof. W. J. M. Rankine on the principle of the transformation of, 1857, 189.
Struthio camelus, Dr. H. Riley on the foot of the, 1836, 98.
Strychnia, new method of instituting post-mortem researches for, by J. Horsley, 1856, 53.
——, experiments on animals with, and probable reasons for the non-detection of, in certain cases, by J. Horsley, 1856, 55.
——, brucia, &c., J. Horsley on testing for, 1856, 53.
—— and brucia from nux vomica, new method of extracting, by J. Horsley, 1856, 54.
Strychnine, on the action of concentrated sulphuric acid on cubebin in relation to the test for, by J. S. Brazier, 1859, 256.
——, on the detection of, by Dr. S. Macadam, 1856, 55.
Sturm's auxiliary functions, Prof. Sylvester on the relation of, to the roots of an algebraic equation, 1841, 23.
Stygina, a new genus of Silurian fossils, J. W. Salter on, 1852, 59.
Submarine circuits—is the law of squares applicable or not to the transmission of signals in?, by W. Whitehouse, 1856, 21.
Substitutions, Rev. T. Kirkman on the roots of, 1860, 4.
Sugar, Dr. Scoffern on the combined use of the basic acetates of lead and sulphurous acid in the colonial manufacture of, 1849, 42.
—— of the south of Spain, Dr. Scoffern on the, chiefly in connexion with the employment of acetate of lead and sulphurous acid as purifying agents, 1850, 60.
——, on a method of refining, by Dr. Daubeny, 1857, 45.
——, produced in India, contributions to the statistics of, by Col. Sykes, 1849, 108.
——, beet-, Prof. W. N. Hancock on its manufacture in the United Kingdom, 1851, 101.
——, crystals of, in Rhododendron ponticum, Prof. Henslow on, 1836, 106.
——, diabetic, Prof. T. Thomson on, 1838, 43.
——, crystallized diabetic, Dr. R. D. Thomson on the composition of, 1841, 54.
—— and amyloid substances, Dr. R. M'Donnell on the formation of, in the animal economy, 1860, 129.
Sulphate of iron and copper, native, of Cronebane copper mine, R. Mallet on the, 1837, 47.
—— of iron in developing photographic images, R. Hunt on, 1844, 36.

Sulphate of lead, sulphuretted, examination of, by J. F. W. Johnston, 1831–32, 577.
—— and nitrate of lead, Prof. T. Clark on the atomic weight of, 1839, 45.
—— of lime with water, Prof. J. F. W. Johnston on a new compound of, 1838, 59.
—— of lime, Chevalier Claussen on its effect upon vegetable substances, 1853, 38.
Sulphates, alkaline, contained in alums, on a mode of conserving the, by Prof. Frankland, 1855, 62.
Sulphocyanides, E. A. Parnell on some subjects connected with the, 1841, 51.
Sulphomethylic acid, Dr. R. Kane on the salts of, 1835, 42.
Sulphur, Dr. Schafhaeutl on, 1840, 68.
—— found abundantly in the mountains of Mahra in Africa, 1846, 69.
——, on the effect of pressure on the temperature of fusion of, by W. Hopkins, 1854, 58.
—— and phosphorus in organic compounds, on a method of determining, by Prof. Voelcker, 1855, 73.
——, vapour of, Rev. T. Exley on the specific gravity of the, 1838, 64.
Sulphurets, on the action of, on metallic silicates at high temperatures, by D. Forbes, 1855, 62.
Sulphuretted hydrogen, Dr. Lankester on the production of, 1841, 57.
Sulphuric acid, Prof. T. Thomson on the manufacture of, in Glasgow, 1840, 59.
—— acid, Prof. Barker on its separation from peroxide of iron, 1835, 52.
—— acid, on tests for, when thrown on the person, by Dr. R. D. Thomson, 1840, 84.
—— acid in the air and water of towns, Dr. R. A. Smith on, 1851, 52.
—— acid, concentrated, on its action on cubebin in relation to the test for strychnine by bichromate of potash and sulphuric acid, by J. S. Brazier, 1859, 256.
—— and arsenious acids, Dr. Schafhaeutl on a new compound of, 1840, 69.
—— acid and water, Prof. T. Thomson on the combinations of, 1836, 56.
—— acid and water, on certain laws observed in the mutual action of, by B. Stewart, 1855, 70.
Sulphurous acid and the basic acetates of lead, Dr. Scoffern on the combined use of, in the manufacture of sugar, 1849, 42.
—— acid and acetate of lead, as purifying agents in the manufacture of sugar, Dr. Scoffern on, 1850, 60.
—— acid gas, on its production from the combustion of coal, by J. Spence, 1854, 75.
Sun, H. Lawson on spots in the, 1847, 9.
——: M. Chacornac on solar spots and fæculæ, 1854, 19.
——: suggestions for the observation of the annular eclipse of Oct. 1847, 1847, 16.
——, annular eclipses of the, Rev. Prof. Powell on an explanation of the "beads" and "threads" in, 1848, 2.
Sun: annular eclipse of Oct. 9, 1847, Rev. Prof. Powell on observations of the, 1848, 3.
——, Prof. C. P. Smyth on the red prominences seen during the total eclipse of the, in 1851, 1852, 13.
——, eclipse of the, mentioned in the first Book of Herodotus, Rev. Dr. E. Hincks on the, 1856, 27.
——, on the constancy in amount of heat radiated from the, by Prof. C. P. Smyth, 1856, 28.
——, Sir D. Brewster on the blue colour of the, 1840, 11.
——, on photographs of the, by Rev. J. B. Reade, 1854, 10.
——, Prof. Draper on a change produced in the properties of an elementary substance by exposure to the beams of the, 1843, 9.
Sun's rays, Rev. Prof. Cumming on an instrument for measuring the heating effect of the, 1833, 418.
—— surface, R. Hodgson on a brilliant eruption on the, 1860, 36.
Sunbeams, H. Twining on some of the appearances peculiar to, 1851, 35.
——, converging, Rev. Prof. Powell on, 1852, 12.
Sun-dial, universal, notice of a, 1849, 34.
——, moveable horizontal, M. Donovan on a, 1857, 24.
Sun-signals, on a hand heliostat for, by F. Galton, 1858, 15.
Suns, meteors, &c., D. Vaughan on the light of, 1857, 42.
Superphosphates, on the methods of analysing the, by Prof. Voelcker, 1857, 60.
Surfaces, vibrating, Prof. Wheatstone on the acoustical figures of, 1831–32, 558.
—— at minute distances, Rev. Prof. Powell on the repulsion excited between, by the action of heat, 1834, 549.
—— of different colours, on the binocular vision of, by Sir D. Brewster, 1855, 9.
—— of bodies, on the absorption of matter by the, by Sir D. Brewster, 1855, 9.
—— of wine and other alcoholic liquors, on certain curious motions observable on the, by Prof. J. Thomson, 1855, 16.
——, umbilical, of the second order, having three unequal axes, on a general method of deriving the properties of, from the properties of the sphere, by Rev. Dr. Booth, 1858, 2.
Survey for level, from Bridgewater to Axmouth, 1837, 59.
—— for ascertaining the relative levels of land and sea, 1837, 59.
Surveying instrument, new portable, by J. Dunn, 1834, 594.
Süs tribes of Morocco, E. Schlagintweit on the, 1860, 177.
Suspension-bridge, steel, over an arm of the Danube at Vienna, Prof. W. J. M. Rankine on the, 1831–32, 608.
——, flexible, W. J. Curtis on a, 1837, 132.

Suspension-bridge over the Avon, T. Motley on a, 1838, 157.
Suspension-bridges, J. M. Rennel on trussing for the roadways of, 1841, 102.
Suture, C. Brooke on a new mode of, applicable to plastic operations, 1845, 24.
Swallow tribe, E. J. Lowe on a singular mortality among the, 1855, 112.
Swedes, Dr. Latham on certain localities not in Sweden occupied by, 1853, 86.
Swiss, ancient, on the lacustrine homes of the, by M. Troyon, 1858, 154.
Swords, W. Greener on the manufacture of the finer irons and steels for, 1849, 115.
Sylvia tithys, on a singular locality chosen for its nest, by Dr. M. Barry, 1852, 71.
Symphytum officinale, Prof. J. Buckman on the growth of, 1853, 63.
Sympiesometer, new, Prof. J. D. Forbes on a, 1834, 593.
Syro-Arabian railway, a proposed new route to India, by J. Locke, 1856, 114.

Table-land of Abessinia, Dr. Beke on the physical character of the, 1846, 70.
Tactions of Apollonius of Perga, Dr. Brennecke on some solutions of the problem of, by modern geometry, 1860, 4.
Tænia, Dr. D. Williams on two specimens of, 1844, 85.
Tagua plant, or vegetable ivory, Dr. Lankester on the, 1845, 70.
Talbotypes, positive, Sir D. Brewster on an improved method of taking, 1845, 10.
——, notice of a series of, exhibited by Sir D. Brewster, 1850, 6.
Talpina?, new, C. B. Rose on the discovery of a, 1852, 55.
Tangent wheels, G. L. Molesworth on, 1857, 186.
Tannic and gallic acids, on their action on iron and alumina mordants, by Prof. F. C. Calvert, 1854, 65.
Tannin, on the conversion of, into gallic acid, by J. Horsley, 1856, 52.
Tanning, W. Herapath on a new process for, 1838, 71.
Tantalite, Bavarian, Prof. H. Rose on the new metal Pelopium contained in the, 1846, 37.
Tape-worm, as prevalent in Abyssinia, Dr. Hodgkin on the, 1844, 85.
Tarentaise, C. Bunbury on the occurrence of fossil plants of the carboniferous period associated in the same bed with belemnites in the, 1848, 64.
Tartaric, citric, and oxalic acids, Prof. F. C. Calvert on their action on cotton and flax fibres, 1854, 65.
Tartrate and racemate of lead, Prof. T. Clark on the atomic weight of, 1839, 49.
Taste, experiments on the sense of, by Dr. M. Hall and S. D. Broughton, 1836, 126.
Taxodium distichs, W. Nicol on the structure of, 1835, 73.
"Tayleur," Rev. Dr. Scoresby on the loss of the iron ship, 1854, 49.
Tea and alcohols, their action contrasted, by Dr. E. Smith, 1860, 145.
Teas, black and green, of commerce, Prof. Royle on the, 1852, 69.
Teeth, Dr. J. Macartney on their structure and decay, 1836, 115.
——, human, Prof. J. Goodsir on the origin and development of the, 1838, 121.
——, Prof. Owen on the structure of the, 1838, 135.
—— of fishes, Prof. Owen on the, 1838, 137.
—— of reptiles, Prof. Owen on the, 1838, 144.
—— of mammalia, Prof. Owen on the, 1838, 145.
——: on the follicular stage of dentition in the ruminants, by Prof. J. Goodsir, 1839, 82.
—— of the British Pulmoniferous mollusca, W. Thomson on the, 1850, 126.
——, fossil, of the Sauroid fishes, Sir D. Brewster on, 1838, 90.
Telegraph, day and night, J. Garnett on a, 1838, 159.
——, electric, on rendering it subservient to meteorology, by J. Ball, 1848, 12.
——, electric copying, F. C. Bakewell on the, 1849, 110; 1851, 11.
——, electro-magnetic, Alexander's and Ponton's, notice of, 1840, 213.
——: two letter-codes, Whishaw's system of, 1848, 123.
——, speaking, F. Whishaw on the, 1848, 125.
——, Whishaw's "uniformity of time," 1848, 123.
——, on a uniform reckoning of time in connexion with the, by J. J. Murphy, 1857, 26.
——, North Atlantic, Col. Schaffner on the geography of the, 1860, 178.
——, submarine, on the origin of the, and its extension to India and America, by J. W. Brett, 1854, 7.
—— communications, submarine and subterranean, C. F. Varley on improvements in, 1854, 17.
—— for communicating across rivers and seas without a submerged cable, J. B. Lindsay on a, 1854, 157.
——, Prof. W. Thomson on the effects of induction in long submarine lines of, 1857, 21.
—— cable, electric, on the proportion between the length required and its specific gravity, by Capt. Blakely, 1857, 11.
—— cables, on constructing and laying, by J. Mackintosh, 1858, 214.
—— wires, submarine, on peristaltic induction of electric currents in, by Prof. W. Thomson, 1855, 21.
Telegraphic code box, Whishaw's, 1848, 123.
—— dispatch box, Whishaw's, 1848, 123.
—— and other purposes, F. Whishaw on the subaqueous rope for, 1848, 123.

Telegraphic cables, submarine, on an apparatus for laying down, by H. Conybeare, 1858, 209.
—— cables, on constructing and laying, by J. Mackintosh, 1858, 214, 215.
—— communications by land and sea, F. C. Bakewell on, 1852, 121.
—— communication between England and America, F. C. Bakewell on, 1854, 147.
—— communication with India, General Chesney on, 1857, 126.
—— communication between Great Britain and Ireland, by the Mull of Cantyre, Prof. W. J. M. Rankine on, 1852, 128.
——, electro-, communication in England, Prussia, and America, F. Whishaw on the state of, 1849, 133.
—— conductors, on some of the methods adopted for ascertaining the locality and nature of defects in, by C. F. Varley, 1859, 252.
—— time signals, C. V. Walker on, 1852, 131.
—— wires, submarine, W. Hall on a process for covering with india-rubber, 1860, 211.
—— wires, S. W. Silver on gutta percha and india-rubber as insulators for, 1860, 212.
—— wires, Messrs. Werner and Siemens on a mode of covering, with india-rubber, 1860, 215.
Telegraphs, electric, of the Midland railway, W. H. Barlow on the, 1847, 21.
——, electric, F. Whishaw on the multitubular pipes and panergous joints for, 1848, 123.
——, hydraulic, hydro-mechanical, mechanical, and "uniformity of time," F. Whishaw on the, 1848, 123.
——: on the extension of communications to distant places by means of electric wires, by General Chesney, 1858, 148.
——: on magneto-electricity and underground wires, by E. B. Bright, 1854, 8.
——, electric submarine, Messrs. Werner and Siemens on the principles and practice involved in dealing with the electrical conditions of, 1860, 32.
——, subaqueous, F. Whishaw on chain pipes for, 1849, 132.
Telegraphy: on an instrument for determining the value of intermittent or alternating electric currents, by W. Whitehouse, 1856, 19.
——: the law of the squares—is it applicable or not to the transmission of signals in submarine circuits?, by W. Whitehouse, 1856, 21.
——: on the hand heliostat, by F. Galton, 1858, 15.
——: on the transmission of electricity through water, by J. B. Lindsay, 1859, 13.
——, submarine: observations on an electric cable, by W. Whitehouse, 1855, 23.
Telekouphonon, or speaking telegraph, F. Whishaw on the, 1848, 125.
Telemeter, an instrument for measuring actual distances, P. Adie on the, 1860, 59.
Teleosauri, on the skin and food of, by C. Moore, 1856, 69.
Teleosaurus ischnodon, a new species of vertebrate fossil, notice of, 1854, 80.
Telescope, H. F. Talbot on the improvement of the, 1842, 16.
——, E. Bowman on determining distances by the, 1841, 42.
——, graphic, C. Varley on a, 1853, 10.
——, large, H. Lawson on a method of contracting the aperture of a, 1846, 9.
——, large: H. Lawson on the arrangement of a solar eyepiece, 1846, 9.
——, reflecting, T. Davison on a, 1833, 420.
——, reflecting, for celestial photography, H. Draper on a, 1860, 63.
—— speculum of silvered glass, L. Foucault on a, 1857, 6.
Telescopes, astronomical, M. Boguslawski on a stand for, 1845, 6.
——, Dr. R. Greene on a portable equatorial stand for, without polar axis, 1846, 8.
——, Rev. Prof. Powell on a new equatorial mounting for, 1849, 2.
——, reflecting, on improvements in the optical details of, by T. Grubb, 1857, 8.
——, reflecting, J. Nasmyth on forming concave mirrors for, 1839, 7.
——: on a method of supporting a large speculum, by W. Lassell, 1850, 180.
——, reflecting, Earl of Rosse on procuring plain specula of silver for, 1851, 12.
——, reflecting, J. D. Sollitt on the composition and figuring of the specula of, 1853, 10.
——, Dr. R. Greene on polishing the specula of, 1843, 11.
——, reflecting, on a machine for polishing specula for, by Dr. R. Greene, 1856, 24.
——, reflecting, on a collimator for completing the adjustments of, by Prof. G. J. Stoney, 1856, 30.
——, on natural occurrences that impair the vision of, by C. Varley, 1854, 48.
Tellina proxima, in the glacial clay in Belhelvie, notice of, by Dr. Dickie, 1859, 147.
Temperature, Dr. Ure on a self-acting physical apparatus for regulating, 1833, 419.
—— and mechanical force, J. J. Waterston on a law of mutual dependence between, 1853, 11.
——, on a thermometer for measuring fluctuations of, by B. Stewart, 1856, 47.
——, note on observations of, by Dr. Siljeström, 1858, 39.
—— of the earth, W. Hopkins on the, 1837, 92.
—— of various parts of North America, table of, by Dr. Daubeny, 1838, 31.
—— of the British Isles, A. Petermann on the, and its influence on the distribution of plants, 1849, 26.
——, mean, in India, Col. Sykes on the, 1834, 567.

Temperature of the air in York Minster, Prof. Phillips on the, 1841, 29.
—— of the air at Point Barrow, Dr. J. Simpson on the, with remarks by Prof. Haughton, 1857, 37.
—— of the winter months, G. Hutchinson on a method of prognosticating the, 1840, 41.
——, T. Hopkins on the influence of mountains on, in the northern hemisphere, 1841, 28.
—— in mountain countries, J. Ball on a plan for systematic observations of, 1860, 37.
—— of rivers, Prof. W. J. M. Rankine on the causes of the excess of, above that of the atmosphere, 1852, 30.
——, surface, of the North Atlantic and northern oceans, Rev. Dr. Scoresby on the, 1853, 18.
—— of the flowers and leaves of plants, E. J. Lowe on the, 1859, 135.
—— in the slate and granite of Cornwall, W. J. Henwood on the, 1837, 36.
——, on the decrease of, over elevated ground, by Prof. Hennessy, 1858, 36.
—— of the earth in deep mines, Prof. E. Hodgkinson on the, 1839, 19.
—— of the earth in deep mines near Manchester, Prof. E. Hodgkinson on the, 1840, 17.
——, underground, on a method of reducing observations of, by J. D. Everett, 1859, 245.
——, underground, on the reduction of periodical variations of, with applications to the Edinburgh observations, by Prof. W. Thomson, 1859, 54.
——, minimum, at Greenwich and Utrecht, J. P. Harrison on the similarity of the lunar curves of, 1860, 44.
——, on lunar influence on, by J. P. Harrison, 1858, 36.
——, on the thermostat, or heat-governor, for regulating, by Dr. A. Ure, 1833, 419.
——, terrestrial, on the use of observations of, for the investigation of absolute dates in geology, by Prof. W. Thomson, 1855, 18.
Tendo Achillis, ossified, Dr. Lonsdale on an, 1840, 165.
Tendons, on the repair of, after their subcutaneous division, by B. E. Brodhurst, 1859, 160.
Tendril in the cucumber, Dr. T. Bell Salter on the true nature of the, 1846, 88.
Terbium, a new metal, Prof. Mosander on, 1843, 25, 30.
Terebella medusa, C. S. Bate on, 1849, 72.
Terebratula, living, dredged off Skye, identical with the fossil T. cistellula, notice of a, 1847, 77.
Terebratulidæ, A. Hancock on the anatomy of the, 1856, 94.
Terebratulina caput-serpentis, L. Barrett on, 1855, 107.
Teredines, British, J. G. Jeffreys on the, 1860, 117.
Teredo navalis, Prof. Van der Hoeven on the, 1860, 136.
Tertiary beds of Norfolk and Suffolk, E. Charlesworth on remains of vertebrated animals in the, 1836, 84.
—— beds of Hampshire, E. Charlesworth on new species of Testacea from the, 1849, 52.
—— clay and lignite of Ballymacadam, near Caher, co. Tipperary, A. B. Wynne on the, 1857, 94.
—— deposit in Yorkshire, Prof. Phillips on a newly discovered, 1835, 62.
—— deposits, E. Charlesworth on Sir C. Lyell's classification of, 1836, 86.
—— districts of Ireland, Sir R. Griffith on the, 1852, 48.
—— freshwater strata of the Isle of Wight, J. Prestwich on the occurrence of a species of Cypris in, 1846, 56.
—— and alluvial basin of the Middle Rhine, Sir R. I. Murchison on the fossil contents of the, 1843, 55.
—— and cretaceous formations of the Isle of Wight, Prof. E. Forbes on the, 1844, 43.
—— fossils of India, W. H. Baily on the, 1859, 97.
—— rocks in the islands stretching from Java to Timor, J. B. Jukes's notice of, 1846, 67.
Tessellated pavements discovered at Cirencester, Prof. Buckman on some chemical facts connected with the, 1850, 48.
Testacea, new species of, from the Hampshire tertiary beds, E. Charlesworth on, 1849, 52.
Testacean, new, Prof. E. Forbes on a, 1851, 77.
Tetanus, Dr. O'Beirne on, 1836, 109.
Tetramorphism of carbon, H. C. Sorby on the, 1850, 62.
Tetrao Rakelhahn, Dr. Charlton on, 1838, 107.
Tetrastoma Playfairei, a parasite existing in the stomach of the Cydippe, Prof. E. Forbes on, 1840, 142.
Textile fabrics, Dr. H. Cleghorn on plants employed in Hindostan in the manufacture of, 1850, 310.
Thames Tunnel in its completed condition, Sir M. I. Brunel on the, 1842, 111.
Thames water, on the condition of, as affected by London sewage, by Dr. R. Barnes and Dr. Odling, 1857, 44.
Thecacera virescens, a new species of nudibranchiate mollusca, Messrs. Alder and Hancock on, 1851, 74.
Thecodontosaurus and Palæosaurus, W. Sanders on the age of the, 1849, 65.
Therapeutic application of air-tight fabrics, Prof. Williams on the, 1842, 77.
Thermal springs of North America, Dr. Daubeny on the, 1838, 91.
Therm-anemometer, Prof. Phillips on the, 1849, 28.
Thermo-barometers compared with barometers at great heights, M. R. von Schlagintweit on, 1860, 50.

Thermo-electric qualities of metals, on the effects of mechanical strain on the, by Prof. W. Thomson, 1855, 17.
—— position of aluminium, Prof. W. Thomson on the, 1855, 20.
Thermo-electricity, J. Prideaux on, 1833, 384.
——, experiments in, by Dr. J. Read, 1846, 46.
——, Prof. J. Tyndall on an experiment in, with Prof. Magnus's monothermic pile, 1851, 18.
——, experimental researches in, by Prof. W. Thomson, 1854, 13.
Thermometer, notice of a register of hourly observations of the, at Plymouth, 1831–32, 579.
——, on observations of the, made during ascents in balloons, by T. Rush, 1849, 29.
—— discovered in Italy, C. Babbage on a, 1836, 77.
——, maximum, new self-registering, Prof. J. Phillips on a, 1831–32, 580.
——, new maximum, notice of Negretti and Zambra's, 1855, 24.
——, mercurial minimum, Negretti and Zambra's, Dr. J. Lee's notice of, 1856, 40.
——, self-registering, C. Brooke on, 1846, 17
——, self-registering, M. Harrison on a, 1848, 14.
——, wet-bulb, on the formula for the, by Capt. Strachey, 1852, 31.
—— for measuring fluctuations of temperature, B. Stewart on a, 1856, 47.
Thermometer-stand, H. Lawson on a, 1845, 17.
Thermometers, standard, on the graduation of, at the Kew observatory, by J. Welsh, 1853, 34.
——, Col. Sykes on the measurement of heights by, 1835, 25.
——, boiling point, intended for the measurement of heights, instructions for the graduation of, by J. Welsh, 1856, 49.
——, earth-, observations with, by Prof. C. P. Smyth, 1856, 28.
——, maximum self-registering, Prof. J. Phillips on a new method of making, 1856, 41.
Thermometrical maxima, remarkable, at or near the moon's first quarter during twelve years, R. Edmonds on, 1850, 32.
—— observations at Devonport, notice of the, 1831–32, 579.
—— stations on Mont Blanc, on the establishment of, by Prof. J. Tyndall, 1859, 56.
Thermostat, an instrument for maintaining a water-bath at constant temperatures, J. Waterhouse on the, 1858, 71.
——, or heat-governor, Dr. Ure on the, 1833, 419.
Thistle (Cnicus tuberosus), notice of the finding of the, at Avebury Hills, 1857, 95.
Thorax, Dr. W. Stokes on the effects of accumulations of liquids or of air within the cavity of the, 1835, 98.
Thornback, common, Dr. A. Thomson on the, 1834, 623.
Thunder, Rev. S. Earnshaw on the velocity of the sound of, 1860, 58.
Thunder-storm, Rev. T. Rankin on the singular appearance of a, 1844, 23.
Thunder-storms, English, on results of an investigation into the phenomena of, by G. J. Symons, 1860, 52.
Thylacinus (great dog-headed opossum), Prof. Owen on the, 1841, 70.
Tibetan and Indian families, Dr. Latham on the transition between the, in respect to conformation, 1849, 85.
Tic-douloureux, Dr. Newbiggin on the influence of Croton oil in, 1840, 156.
Tidal action, secular variations in lunar and terrestrial motion from the influence of, D. Vaughan on, 1857, 40.
—— basins, on the formation of the entrances to, by B. B. Stoney, 1857, 198.
—— rivers, on improvements in, by J. S. Russell, 1837, 131.
Tide, remarkable, in the British Channel, G. Roberts on a, 1848, 37.
—— of the North Sea, Capt. Hewett on the rise and fall of the, 1841, 32.
—— observations, notice of, by Admiral Lütke, 1839, 11.
—— observations, Bache's, Rev. Dr. Whewell on, 1854, 28.
—— observations on the coast of Ireland, G. B. Airy on the results of the, 1844, 4.
——, R. Roberts on apparatus by which the influx and efflux of the, are rendered available as agents for effecting the motions of clockwork, 1849, 128.
Tide-gauge, self-registering, invented by Mr. Wood, notice of a, 1844, 6.
Tide-machine, notice of a, 1836, 130.
Tides, on the connexion of the weather with the, 1836, 41.
——, Rev. Dr. Whewell on the, 1836, 130; 1837, 4.
——, diurnal inequality in the seas on the coast of Kamtschatka and the west coast of N. America, notice of the, 1839, 11.
——, Rev. Dr. Whewell on Capt. FitzRoy's views of the, 1839, 11.
——, Rev. Dr. Whewell on our ignorance of the, 1851, 27.
—— and wind, H. C. Sorby on the currents produced by the action of the, 1855, 97.
——, abnormal, of the Firth of Forth, J. S. Russell on the, 1842, 115.
——, abnormal, Mr. Thomas on, 1843, 19.
—— at Arbroath, A. Brown on the extraordinary flux and reflux in July 1843 of the, 1843, 18.
—— of the Atlantic and Pacific, Rev. Dr. Whewell on the, 1839, 12.
—— of Dundee and Glasgow, D. Mackie on the, 1837, 5.
—— in the harbour of Glasgow, and velocity

of the tidal wave of the River Clyde, W. Bald on the, 1840, 49.
Tides of the Mersey, Capt. Denham on the, 1837, 85.
—— of Nova Scotia, Rev. Prof. Chevallier on the, 1856, 23.
—— of the east coast of Scotland, J. S. Russell on the, 1844, 6.
Tilling land, on improvements in machines for, by B. Samuelson, 1853, 121.
Timber attacked by the larvæ of Callidium bajulum, Rev. L. Jenyns on, 1847, 85.
——, Prof. Hodgkinson on the strength and elasticity of, 1849, 116.
Time, A. F. Osler on the application of the principle of the vernier to the subdividing of, 1842, 9.
Time-signals, telegraphic, C. V. Walker on, 1852, 131.
——, Prof. C. P. Smyth on the transmission of, 1855, 29.
Tin, compounds of, with arsenic, R. Haeffely on the, 1855, 64.
——, Dr. W. Odling on the stoma of, 1858, 58.
—— and platina, protochlorides of, Sir R. J. Kane on combinations of the, 1835, 44.
—— and zinc, on alloys of, by Prof. F. C. Calvert and R. Johnson, 1855, 50.
Tin-plate, on protecting, from corrosion in sea-water, by Prof. E. Davy, 1835, 36.
Tipula tritici, notice of damage to crops done by, 1838, 113.
Tissue spun by caterpillars, J. Dennistoun on a, 1850, 123.
——, woody, Dr. Lankester on the formation of, 1839, 78.
Tissues, animal, Dr. Letheby on the action of oxalic acid on dead, 1846, 41.
Titanium, ammonio-iodide of, Rev. J. B. Reade on, 1857, 57.
——, crystals of, within mica, amethyst, and topaz, Sir D. Brewster on, 1853, 3.
Tithonic rays of the sun, Prof. Draper on the, 1843, 9.
Toad, Dr. J. Macartney on the natural history of the, 1833. 441.
—— found imbedded in a mass of new red sandstone, T. L. Gooch on a, 1835, 72.
Toadstones of Derbyshire, J. Alsop on the, 1844, 51.
Tobacco, Irish and Virginian, Prof. E. Davy on the comparative value of, 1835, 37.
——, on Mr. Phillips's method of discovering adulteration in, by Dr. J. Bateman, 1844, 29.
——, Dr. T. Laycock on diseases resulting from the immoderate use of, 1846, 94.
Tomb of Ezekiel, notes of an excursion to the supposed, by T. K. Lynch, 1853, 89.
Tomopteris onisciformis, notes on, by Dr. E. P. Wright, 1860, 124.
Tongue, Dr. Heming on a disease of the, 1844, 84.
——, Dr. A. Waller on the structure of the nerves in the glands at the inferior surface of the, 1848, 83.
Topaz, on crystals in the cavities of, by Sir D. Brewster, 1844, 9.
——, Sir D. Brewster on the rotation of minute crystals in the cavities of, 1845, 9.
——, Sir D. Brewster on its condition subsequent to the formation of cavities within it, 1845, 9.
——, Sir D. Brewster on the crystallization of tourmaline, titanium, and quartz in, 1853, 3.
——, white, of New Holland, Sir D. Brewster on the, as well fitted for optical purposes, 1860, 8.
Topsails, reefing, notice of Cunningham's plan for, 1854, 150.
Tornadoes, American, W. C. Redfield on, 1840, 40.
Torsion balance applied to inquiries in electricity, by W. S. Harris, 1835, 18.
Touarick alphabet, J. Richardson on a, 1847, 126.
Tourmaline, titanium, and quartz, Sir D. Brewster on the optical phenomena and crystallization of, within mica, amethyst, and topaz, 1853, 3.
Towns, Dr. Laycock on the circumstances affecting the health of, 1844, 90.
——, manufacturing, on the sewerage of, by Dr. F. Wrightson, 1854, 77.
——, B. G. Sloper on the filtration of water for the supply of, 1844, 102.
——, J. Bateman on the collection of water for the supply of, 1844, 100.
——, Dr. R. A. Smith on sulphuric acid in the air and water of, 1851, 52.
——, on the water-supply to, by Dr. J. Strang, 1858, 198.
——, on the supply and purification of water for, by T. Spencer, 1859, 83.
——, public clocks of, J. Hartnup on controlling their movements by galvanic currents, 1857, 13.
——, on moral training for large, by D. Stow, 1855, 191.
Toxodon, Prof. Owen on the teeth of the, 1838, 147.
—— angustidens, a new species of fossil mammalia, Prof. Owen on, 1846, 65.
Trade and commerce the auxiliaries of civilization and comfort, by T. Bazley, 1858, 169.
Transit-circle of the Greenwich observatory, on the pivots and construction of the, by G. B. Airy, 1850, 169.
Transit-clock in the Radcliffe observatory, E. J. Dent on the, 1839, 28.
Transit-instruments, on changes in the position of the, attributed to the temperature of the earth, by Prof. C. P. Smyth, 1847, 37.
Trap district, Valentia, Ireland, G. H. Kinahan on the, 1857, 75.
—— dykes in Mayo and Sligo, Archdeacon Verschoyle on the, 1835, 59.
—— dykes in Arran, Prof. J. Phillips on certain, 1855, 94.

Trap rocks of Berwickshire, D. Milne on the, 1834, 634.
—— rocks of Scotland, on the chronology of the, by A. Geikie, 1859, 106.
Tree discovered erect as it grew, within the Arctic circle, Capt. Sir E. Belcher on a, 1855, 101.
Tree, fruit-bearing, N. Niven on the remarkable result of an experiment upon a, 1857, 100.
Trees, aged, R. Mallet on their power to reproduce themselves, 1837, 102.
——, on the importance of understanding the root-principle in the cultivation of, by N. Niven, 1857, 98.
——, on the growth of, in continental and insular climates, by D. Vaughan, 1859, 140.
—— and plants, on the aversion of certain, to the neighbourhood of each other, by Dr. G. Buist, 1859, 133.
Trematode worm, on a new species of, by Dr. T. S. Cobbold, 1855, 108.
Triangle, in-and-circumscribed, on the porism of, by A. Cayley, 1855, 1.
Triassic beds near Frome, and their organic remains, C. Moore on the, 1858, 93.
—— conglomerates, red, of Torbay, on the Beekites found in the, by W. Pengelly, 1856, 74.
—— drift, C. Moore on the contents of three square yards of, from the neighbourhood of Frome, 1860, 87.
——, liassic, oolitic, and Permian formations, E. Hull on the south-easterly attenuation of the, 1856, 67.
—— shore, Prof. Harkness on the records of a, 1857, 68.
Trichocephalus dispar, on its occurrence in the intestines of man, 1837, 98.
Trichomonas vaginalis of Donné, demonstration of the, by Prof. Kölliker, 1855, 125.
Trifolium medium and T. pratense, Prof. Buckman on, 1856, 83.
—— repens, R. A. C. Godwin-Austen on a series of morphological changes observed in, 1849, 68.
Trigonometrical indicator, notice of a, by Rev. Dr. Scoresby, 1843, 101.
—— survey, on the progress made in the publication of the, 1853, 37.
Trilobites, Irish Silurian, J. W. Salter on, 1852, 59.
——, on the metamorphosis of, as discovered by M. Barrande, by Sir R. I. Murchison, 1849, 58.
—— of the Silurian rocks of Bohemia, on the, 1850, 99.
Triplets, Rev. Prof. Graves on, 1845, 2.
Triticum, on the transmutation of Ægilops into, by Major Munro, 1852, 68.
Troglodytes niger, on the brain of the, by Prof. A. Thomson, 1835, 139.
Trogonidæ, J. Gould on the, 1837, 97.
Tropical climates, Prof. C. P. Smyth on a mode of cooling the air of rooms in, 1850, 133.
Tropical climates, Prof. W. J. M. Rankine on Prof. C. P. Smyth's mechanical process for cooling air in, 1852, 128.
Tropics, on the variations of climate within the, by T. Saunders, 1853, 91.
Trout, malformed, Dr. T. S. Cobbold on a, 1855, 109.
Truscott's plan for reefing paddle-wheels, W. Chatfield on, 1841, 101.
Tubercle, scrofulous, Dr. Fisher on the, 1845, 82.
Tuberculous diseases, R. Carmichael on, 1836, 112.
Tubicolæ, C. S. Bate on the, 1849, 72.
Tubular boiler, new, W. Fairbairn on a, 1852, 125.
—— bridge, on the priority of the invention of the, 1850, 170.
—— crane, wrought iron, W. Fairbairn on a, 1850, 177.
Tubularia indivisa, J. G. Dalyell on the propagation of, 1834, 600.
Tubulariadæ, Profs. Forbes and Goodsir on the relations of Ellisia to the, 1839, 81.
——, Profs. Forbes and Goodsir on a new British zoophyte of the family, 1839, 81.
——, Prof. Allman on the medusoid structure in the reproductive gemmæ of the, 1852, 70.
——, on Dicoryne stricta, a new genus and species of the, by Prof. Allman, 1859, 142.
Tumali language, Dr. Tutschek on the, 1843, 100.
—— words from Dr. Tutschek's vocabulary, Dr. Latham on some, 1847, 123.
Tumuli of Kertch, Dr. D. Macpherson on the, 1856, 115.
—— in Yorkshire, Prof. Phillips on the, 1849, 86.
Tumulus, sepulchral, in East Yorkshire, T. Wright on the opening of a, 1858, 156.
Tungsten, Dr. J. Percy on some of the alloys of, 1848, 57.
Tunnelling, on a method of boring holes in rocks for, by J. Nasmyth, 1854, 157.
Tunnels, W. West on the ventilation of, 1837, 136.
Tuomey's (Prof.) geological map of Alabama, notice of, 1857, 78.
Turbine, J. Glynn on the, 1847, 132.
—— water-wheel, Prof. Gordon on the, 1840, 191.
Turbines, Prof. J. Thomson on some properties of whirling fluids, with their application in improving the action of, 1852, 130.
Turbinolia milletiana, taken in a living state, notice of, 1845, 66; 1846, 69.
Turf of the Cambridgeshire fens, Rev. L. Jenyns on the, 1845, 75.
Turf-bogs of Ireland, on the plants which form the principal part of the, by D. Moore, 1857, 97.
Turks in Central Asia, R. von Schlagintweit on the, 1860, 176.
Typhus fever, Dr. Perry on, 1835, 101.

U Geminorum, a variable star, N. Pogson on, 1859, 36.
Ulmic acid from peat, Prof. J. F. W. Johnston on, 1840, 83.
Undulatory theory, Sir J. F. W. Herschel on the absorption of light by coloured media viewed in connexion with the, 1833, 373.
—— theory of light, Rev. Prof. Powell on the phenomena of prismatic dispersion, in relation to the, 1835, 5.
—— theory of light, Rev. Prof. Powell on Von Wrede's explanation of the absorption of light by the, 1837, 16.
—— theory: Sir D. Brewster on Mr. Airy's explanation of a new polarity of light, 1845, 7.
—— theory: Rev. Prof. Challis and Prof. G. G. Stokes on the aberration of light, 1845, 9.
Unio, Dr. Mantell on a newly-discovered species of, 1844, 42.
—— Roissii, discovered near Boughton, in Craven, notice of, 1837, 100.
Universe, Prof. W. J. M. Rankine on the re-concentration of the mechanical energy of the, 1852, 12.
Upton draining tool, A. Milward on the, 1849, 122.
Upupa, Linn., and Irrisor, Lesson, Prof. Strickland on the structure and affinities of, 1843, 70.
Uramile, Prof. Gregory on the preparation of, 1840, 74.
Urea, Prof. Gregory on the pre-existence of, in uric acid, 1840, 73.
—— as a direct source of nitrogen to vegetation, Dr. C. A. Cameron on, 1857, 44.
Urethra, H. Earle on the, 1833, 460.
Uria troile and U. lacrymans, Rev. F. O. Morris on the specific distinctions of, 1857, 105.
Uric acid, Prof. Liebig on the products of the decomposition of, 1837, 38.
—— acid, Prof. Gregory on the pre-existence of urea in, 1840, 73.
Urinary salts, Sir J. Murray on the disordered conditions of the human body caused by, 1837, 106.
Urn, Anglo-Saxon, C. R. Smith on a Roman sepulchral inscription on an, 1855, 145.
Urse Majoris, R & S, variable stars, N. Pogson on, 1859, 36.
Urticaceæ, Dr. H. Cleghorn on the manufacture of textile fabrics from species of the, 1850, 112.
Usury laws, Prof. W. N. Hancock on the, 1849, 93.
Uterine decidua, Dr. W. F. Montgomery on a peculiarity in the structure of, 1836, 121.
—— hæmorrhage, R. Torbock on the mode of arresting, 1838, 133.

Vaccination and small-pox, statistics of, in the United Kingdom, by Dr. W. Moore, 1859, 223.
Vaccine virus (new) of 1838, J. B. Estlin on the, 1839, 105.
—— virus preserved in glycerine, 1857, 115.
Vacuum tubes, electrical, Prof. W. B. Rogers on the phenomena of, 1860, 30.
Valerianic acid from indigo, Dr. J. S. Muspratt on the supposed formation of, 1844, 33.
Valve, india-rubber, for drainage of low lands into tidal outfalls, Prof. J. Thomson on an, 1855, 210.
——, safety-, for steam-boilers, J. Hopkinson on a, 1853, 119.
Valve-engine, rotatory, Locking and Cook's, notice of, 1853, 120.
Valve regulator, balanced, for stoves, Dr. Arnott on the, 1847, 47.
Valves, stopcocks, &c., on improvements in, for regulating the passage of fluids, by G. Buchanan, 1850, 171.
Vanadic acid, Prof. J. F. W. Johnston on some crystals of, 1831–32, 78.
Vanadium, account of, by Prof. J. F. W. Johnston, 1831–32, 78.
Vandyke-brown, T. H. Rowney on the composition of, 1850, 70.
Vandykite, the mineral, T. H. Rowney on, 1855, 70.
Vanilla of commerce, Prof. Morren on its production in Europe, 1838, 116.
Vapour, Capt. Shortrede on the force of, 1846, 16.
——, T. Hopkins on computing the quantity of, in a vertical column of the atmosphere, 1849, 24.
——, aqueous, of the atmosphere, Admiral FitzRoy on the, 1859, 50.
——, aqueous, superheated, apparatus for transforming it into illuminating gas, MM. Isoard and Son on, 1859, 69.
Vapours, saturated, J. J. Waterston on the gradient of density in, 1852, 2.
——, saturated, and their liquids, J. J. Waterston on the density of, at the point of transition, 1853, 11.
——, on practical tables of the latent heat of, by Prof. W. J. M. Rankine, 1855, 208.
——, on formulæ for the maximum pressure and latent heat of, by Prof. W. J. M. Rankine, 1854, 58.
Variations, calculus of, Prof. Lindelöf on the, 1859, 5.
Variola-Vaccinia, Dr. Inglis on the origin of, 1839, 104.
Vascular system of the lower Annuloss, Prof. Huxley on the, 1854, 109.
Vegetable cells, Prof. Henfrey on the development of, 1845, 68.
—— food-stuffs, on estimating the cellular matter or "woody fibre" in, by T. Segelcke, 1859, 79.
—— growth, G. W. Hall on the promotion of, 1842, 64.
—— impregnation, Dr. Aldridge on, 1840, 144.
—— morphology, and the theory of the me-

tamorphosis of plants, M. T. Masters on, 1859, 136.
Vegetable monstrosities, Rev. W. Hincks on, 1838, 120.
—— monstrosities, Dr. Lankester on some, illustrating the laws of morphology, 1848, 85.
—— physiology, N. Niven on, 1837, 102.
—— physiology: Dr. Daubeny's experiments at the Botanic Garden, Oxford, 1847, 82.
—— ivory, or Tagua plant, Dr. Lankester on the, 1845, 70.
—— ivory, on some of the uses to which it is applied, by Dr. G. Bennett, 1859, 130.
—— wax, E. Solly on bleaching, 1840, 86.
—— substances, Dr. Macartney on the means of preserving, 1836, 100.
—— substances, Chevalier Claussen on the effects of sulphate of lime upon, 1853, 38.
—— productions of Algiers, G. Munby on the, 1849, 71.
—— organisms, peculiar, in coal, Prof. Balfour on, 1854, 97.
—— remains in the new red sandstone, J. S. Dawes on the occurrence of, 1842, 47.
—— remains in the Keuper sandstone of Longdon, Worcestershire, Prof. Strickland on the, 1849, 66.
—— remains in the lower Silurians of the south of Scotland, Prof. Harkness on the, 1854, 86.
—— skeletons, microscopic, found in peat near Gainsborough, by E. W. Binney, 1839, 71.
Vegetables, Dr. Daubeny on excretions from the roots of, 1834, 598.
——, Prof. Peretti on the bitter principles of, 1844, 84.
——, fossil, from the new red sandstone of Worcestershire, J. Yates on the, 1837, 59.
Vegetation, Dr. Daubeny on the effects of arsenic on, 1836, 76.
——, Dr. Daubeny on manures considered as stimulants to, 1841, 47.
——, Dr. Voelcker on the effects of salt on, 1850, 114.
——, on urea as a direct source of nitrogen to, by Dr. C. A. Cameron, 1857, 44.
——, effects of the winter of 1854–55 on, at Aberdeen, by Prof. Dickie, 1855, 105.
—— of the Crimea, Dr. Michelson on the, 1855, 106.
——, arboreal, of Spain, Capt. Widdrington on the, 1847, 88.
—— in continental and insular climates, D. Vaughan on, 1859, 140.
——, diatomaceous, of the Antarctic ocean, Dr. J. D. Hooker on the, 1847, 83.
——, fossil, H. Witham on, 1831–32, 583.
Vein of carbonate of zinc, horizontal, R. W. Fox on the production of a, 1838, 90.
——, copper, in Huel Jewel Mine, R. W. Fox on the electricity of the, 1834, 572.
Veins, mineral, on the relations of, and the non-metalliferous joints in rocks, by Prof. Phillips, 1834, 654.
Veins, metalliferous, R. W. Fox on voltaic agencies in, 1836, 81.
——, metalliferous, of Cornwall, H. T. De la Beche on phenomena connected with the, 1836, 83.
—— in the mines of Dolcoath and Huel Prudence in Cornwall, W. J. Henwood on some intersections of, 1837, 74.
Vein-stones, on the collection and arrangement of, and importance of their connexion with the rocks in which they occur, 1831–32, 585.
Veins, J. Blake on the action of substances injected into the, 1838, 129.
——, Dr. J. R. Cormack on the effects of air when injected into the, 1840, 157.
Velocentimeter, improved, F. Whishaw on the, 1848, 124.
Velutina elongata, a new testaceous mollusk, notice of, 1839, 80.
Ventilating buildings, Mr. Ritchie on, 1840, 214.
Ventilation, J. N. Hearder on descending flues and their application to the purposes of, 1841, 105.
—— of ships, J. Cunningham on the, 1854, 148.
—— of tunnels, W. West on the, 1837, 136.
Venus, planet, Rev. E. Hincks on recorded observations of the, in the 7th century before Christ, 1860, 35.
Vermis cerebelli in the albatros, Prof. Retzius on the peculiar development of the, 1855, 133.
Versailles railway accident, J. Gray on the causes of the, 1844, 97.
Vertebræ, cranial, Dr. W. Macdonald on, 1845, 85.
——, cervical and dorsal, Dr. W. Macdonald on the erroneous division of the, 1848, 89.
Vertebral homologies in animals, Dr. W. Macdonald on the, 1855, 128.
Vertebrata, on the development of the spermatic bodies of the higher, by Prof. Kölliker, 1855, 125.
——, terrestrial, P. L. Sclater on the geographical distribution of, 1860, 121.
—— of the county of Cork, Dr. Harvey on the, 1843, 68.
Vertebrated animals found in the tertiary beds of Norfolk and Suffolk, E. Charlesworth on, 1836, 84.
Vespertilionidæ, H. Carlile on the form of the external ear in some species of, 1857, 117.
Vessels, G. Rennie on the propulsion of, by the trapezium paddle-wheel and screw, 1841, 101.
Vesuvius, on an eruption of (1855), by Rev. A. S. Farrar, 1855, 55.
—— and its eruptions, F. D. Hartland on, 1856, 111.

Viaduct over the river Boyne at Drogheda, J. Barton on the, 1857, 178.
Viaducts, timber, B. Green on constructing, 1838, 150.
Vibrations of a cylindrical tube, Rev. J. Challis on the, 1835, 12.
Vibrio that attacks grasses, J. Hardy on a, 1850, 124.
Victoria regina, notice of Sir R. Schomburgk's discovery of, 1837, 100.
—— regia, on the flowering of, in the Royal Botanic Garden, Glasgow, by P. Clark, 1855, 102.
Vidua paradisea, Prof. Strickland on a peculiar structure in the submedial pair of rectrices of, 1850, 126.
Vinca, Prof. E. Forbes on a remarkable monstrosity of a, 1849, 70.
Vinegar, Dr. C. J. B. Williams on a new process for the expeditious manufacture of, 1834, 590.
γ Virginis, Dr. J. Lee on the results of measurements of (for the epoch 1857), by Rear-Admiral Smyth, 1857, 32; (for the epoch 1858), 1858, 29.
Viscera, Mr. Sibson on an apparatus for delineating the position and size of the, 1845, 85.
——, abdominal, on the valvular apparatus connected with the vascular system of the, by Dr. R. M'Donnell, 1857, 115.
Vision, on an ocular parallax in, and the law of visible direction, by Sir D. Brewster, 1838, 7.
—— without retina, on a case of, by Sir D. Brewster, 1852, 3.
——, on a peculiarity of, by Rev. Prof. Powell, 1852, 11.
—— through the foramen centrale of the retina, Sir D. Brewster on, 1858, 7.
—— of distance as given by colour, Sir D. Brewster on the, 1848, 48.
——, impaired, in which objects appear much smaller than natural, Dr. A. Waller on, 1848, 82.
——, minute, W. Petrie on the powers of, 1850, 183.
——, Sir D. Brewster on some important points in the theory of, 1838, 14.
——, Sir D. Brewster on Bishop Berkeley's theory of, 1848, 49; 1849, 6.
——, binocular, Prof. Wheatstone on, 1838, 16.
——, binocular, of surfaces of different colours, Sir D. Brewster on the, 1855, 9.
——, binocular, Rev. J. Dingle on, 1858, 14.
——, binocular, experiments and conclusions on, by Prof. W. B. Rogers, 1860, 17.
Vital and physical forces, G. Newport on the reciprocal relation of the, 1850, 133.
—— principle, on its affinity to electricity, 1847, 91.
—— and electro-magnetic laws, Dr. J. Bullar on the identity of certain, 1846, 29.
Vitality and mind, Dr. R. Fowler on the correlation of, with the physical forces, 1851, 83.
Vitrified forts on the mountains of Noth and Dunnideer, Sir A. L. Hay on the, 1859, 179.
Vitriol, oil of, Dr. T. Thomson on the heat evolved when it is mixed with water, 1836, 56.
Vivaria, marine, Dr. G. Wilson on the artificial preparation of sea-water for, 1854, 77.
Voice, Dr. Blakiston on the, 1839, 99.
—— of the New Holland ostrich, Dr. Macartney on the organ of, 1836, 97.
Volatile fluid, peculiar, W. C. Jones on a, 1836, 74.
Volcanic emanation, on the source of ammonia in, by R. Warington, 1858, 71.
—— islets to the south-east of Japan, including the Bonin islands, A. G. Findlay on, 1856, 110.
—— phenomena, Dr. Daubeny on the chemical theory of, 1836, 81.
—— phenomena, Dr. S. Macadam on the causes of, 1850, 98.
—— products, stratified and unstratified, near Plymouth, Rev. D. Williams on the, 1841, 61.
—— products of the West of England, stratified and unstratified, Rev. D. Williams on the, 1842, 54.
Volcano of Klioutchi, North Asia, A. Erman on the, 1842, 46.
—— (the Kötlugjá) in Iceland, W. L. Lindsay on an eruption of, 1860, 86.
Volcanos, Dr. Daubeny on new facts bearing on the chemical theory of, 1846, 45.
——, chemical theory of, Dr. Daubeny's reply to an objection of Mr. Hopkins to the, 1848, 67.
——, Dr. Daubeny on the elevation-theory of, 1860, 75.
—— of Central Asia, T. W. Atkinson on the, 1858, 75.
——, lunar, T. W. Webb on, 1838, 93.
Voltaic action, Dr. G. Bird on the crystallization of metals by, 1837, 45.
—— action, T. Spencer on the deposition of metals by, 1839, 38.
—— agencies in metalliferous veins, R. W. Fox on, 1836, 81.
—— arrangements, various, W. S. Ward on the comparative cost of working, 1849, 47.
—— battery, A. Crosse's experiments on the, 1836, 47.
—— battery, small, of extraordinary energy, W. R. Grove on a, 1839, 36.
—— battery, gas, W. R. Grove on the, 1845, 30.
—— battery, J. P. Gassiot on the electricity of tension in the, 1846, 47.
—— battery of the highest powers in which potassium forms the positive element, J. Goodman on a, 1847, 50.
—— battery, Capt. Ward on the application of the, to the ignition of gunpowder, 1854, 18.

Voltaic circle, Prof. Graham on the theory of the, 1839, 29.
—— circle, simple, Prof. Schönbein on the electrolysing power of a, 1842, 30.
—— combination, Dr. Andrews on its influence on chemical action, 1838, 69.
—— decomposition of alcohol, Prof. Connell on the, 1840, 81.
—— and ordinary electricities, J. Goodman on the cause of dissimilarity of the, 1842, 18.
—— ignition, W. R. Grove on the peculiar cooling effects of hydrogen and its compounds in cases of, 1848, 54.
—— phenomena, W. Sturgeon on a peculiar class of, 1840, 86.
—— reduction of alloys, C. V. Walker on the, 1845, 30.
Voltameter, Rev. Dr. Robinson on the influence which finely divided platina exerts on the electrodes of a, 1846, 46.
Volume theory, C. M. von Bose on the, 1860, 71.
Volumeter, notice of Dr. Hare's, 1836, 46.
Voluta abyssicola, a living representative of a group of fossil Volutes, L. Reeve on the discovery of, 1849, 64.
Volutor, Rev. J. Booth on the, an improved instrument for describing spirals, invented by H. Johnson, 1858, 207; 1860, 60.
Vorticella, notice of a large species of, 1842, 68.

Wages and prices during the years 1842–1849, comparative statement of, by G. R. Porter, 1849, 101.
Wakefield convict prison, influence of various circumstances in causing loss or gain in the weight of the prisoners in, by W. R. Miner, 1859, 139.
Waldheimia australis, A. Hancock on the anatomy of, 1856, 94.
—— cranium, L. Barrett on, 1855, 107.
Wallflower, Prof. Allman on a singular monstrosity in the, 1851, 70.
Wallsend colliery, G. Clark on the evolution of gas in, 1852, 124.
War, on the application of combustible compounds to be used in, by J. Macintosh, 1858, 214.
Warming and ventilating buildings, Mr. Ritchie on, 1840, 214.
—— buildings by hot water, G. Gurney on the possibility of fire from, 1841, 49.
Washing-machine, atmospheric, notice of J. Fisher's, 1860, 210.
Waste lands, Dr. W. P. Alison on the reclamation of, 1850, 147.
Watches, notice of Mr. Abraham's process for demagnetizing the steel balance-wheels of, 1831–32, 60.
Water, Prof. Tyndall on air-bubbles formed in, 1851, 26.
——, Prof. Oersted on the compressibility of, 1833, 353.
——, W. R. Grove on its decomposition into its constituent gases by heat, 1846, 48.
Water, J. P. Gassiot on the decomposition of, by the galvanic battery, 1853, 39.
——, Dr. T. Andrews on the polar decomposition of, by common and atmospheric electricity, 1856, 46.
——, J. F. Bateman on the discharge of, 1852, 124.
——, F. C. Bakewell on the conduction of electricity through, 1851, 6.
——, Rev. Dr. Robinson on the electrolysis of, 1847, 52.
—— against water, J. I. Hawkins on the friction of, 1843, 99.
——, R. Rawson on the friction of, 1849, 3.
——, J. Jeffreys on the solvent power of, on siliceous minerals, 1840, 124.
——, J. P. Joule on the heat of vaporization of, 1849, 1.
——, on the quantity of heat developed by, when rapidly agitated, by G. Rennie, 1856, 165; 1857, 190.
——, on the quantitative estimation of the soluble combustible contents of a, by J. S. Brazier, 1859, 257.
—— containing a salt of magnesia only, and water containing a salt of magnesia and a salt of lime, D. Campbell on the action of the soap-test upon, 1850, 49.
—— and sulphuric acid, B. Stewart on the mutual action of, 1855, 70.
——, Prof. Allman on the cause of the phenomenon of the coloration of large masses of, 1852, 64.
—— and air of towns, Dr. R. A. Smith on sulphuric acid in the, 1851, 52.
——, J. I. Hawkins on methods of filtering, 1838, 163.
——, on the filtration of, for the supply of towns, 1844, 102.
——, on a new method of ascertaining the quantity of organic matter in, by Prof. Forchhammer, 1849, 37.
——, on the supply and purification of, by T. Spencer, 1859, 83.
——, D. Campbell on Dr. Clark's process for softening, 1855, 54.
——, on the collection of, for the supply of towns, by J. Bateman, 1844, 100.
—— -supply to towns and dwellings, G. Buchanan on improvements in valves, stopcocks or stoppers for regulating the, 1850, 171.
—— -supply to great towns, its extent, cost, uses, and abuses, by Dr. J. Strang, 1858, 198.
—— of the Clyde, on the chemical composition of the, by Dr. S. Macadam, 1855, 64.
—— of the Dead Sea, J. Murray on the chemical examination of the, 1838, 73.
—— of Southampton, H. Osborn on its action on lead, 1846, 42.
—— of the Thames, Dr. R. Barnes and Dr. W. Odling on its condition as affected by London sewerage, 1857, 44.
—— of the Thames, Dr. W. Odling and Dr.

A. Dupré on the composition of the, 1859, 75.
Water, alkaline, of Leeds, W. Huggon on the, 1858, 51.
——, steam-engine for pumping, W. L. Wharton on a, 1833, 421.
—— at great depths, G. Rennie on an instrument for taking up, 1834, 595.
——, Mr. Hall on a machine for raising, by an hydraulic belt, 1838, 158.
——, on raising, from low lands, by W. Fairbairn, 1840, 210.
——, on some modern appliances for raising, by W. E. Carrett, 1858, 208.
——, on a jet-pump for drawing up, by Prof. J. Thomson, 1852, 130; 1853, 130.
——, on an apparatus for giving light under, in diving-operations, by W. S. Ward, 1847, 132.
Waters, on the proportion of phosphoric acid in some, by Dr. A. Voelcker, 1850, 63.
——, hard, Dr. W. L. Lindsay on their action upon lead, 1858, 54.
——, mineral, of Cheltenham, on the salts actually present in the, by Dr. J. H. Gladstone, 1856, 51.
——, spring and river, Prof. Connell on the precipitate caused in, by acetate of lead, 1847, 48.
——, sulphureous, of Yorkshire, Dr. Lankester on plants and animals found in the, 1840, 143.
Water-bath, on an instrument for maintaining it at constant temperatures, by J. Waterhouse, 1858, 71.
Water-filter, Mr. Thom on a, 1840, 206.
Water-lilies, on the arrangement of the air-canals in the, by M. T. Masters, 1854, 102.
Water-meter, J. Parkinson on a, 1849, 125.
——, pressure, W. Gorman on a, 1855, 207.
Water-meters, D. Chadwick on, 1860, 204.
Water-power, on the economy of, by J. Glynn, 1858, 212.
Water-sirene, Prof. J. Donaldson on the, 1850, 174.
Water-spouts, Col. W. Reid on the laws by which they revolve, 1838, 24.
——, Dr. J. Taylor on, 1855, 45.
Water-wheel, turbine, Prof. Gordon on the, 1840, 191.
Water-wheels, horizontal, J. Glynn on, 1858, 212.
Water-works of Newcastle-on-Tyne, J. Glynn on the, 1838, 164.
Wave-lengths, on the law of the, corresponding to certain points in the solar spectrum, by M. Ponton, 1859, 20.
Wave of sound, on the nature of the, by J. S. Russell, 1844, 11.
Wave-theory, as connected with elliptic polarization, Rev. Prof. Powell on the, 1839, 2.
——, Rev. Prof. Powell on a point in the, as applied to heat, 1840, 14.
—— of light, Rev. Prof. Powell on certain points of the, 1841, 25.
Waves, Rev. Prof. Kelland on the theory of, 1840, 50.
——, J. S. Russell's report of a Committee on, 1842, 19.
——, oceanic, W. Walker on, 1842, 21.
——, mechanism of, in relation to steam navigation, J. S. Russell on the, 1837, 130.
—— at sea, Sir J. Robison on measuring the interval and velocity of, 1836, 130.
——, on the lengths and velocities of, by Capt. Stanley, 1848, 38.
—— of the Atlantic, Rev. Dr. Scoresby on their magnitude, velocity, and phenomena, 1850, 26.
——, T. Stevenson on the force of, 1850, 189.
——, on the propagation of, by G. J. Stoney, 1859, 9.
——, atmospheric, Admiral FitzRoy on, 1859, 50.
Wavellite, pyro-electric, A. Gages on a new variety of, 1858, 49.
Wax, on the effect of pressure on the temperature of fusion of, by W. Hopkins, 1854, 58.
——, vegetable, E. Solly on bleaching, 1840, 86.
Wax-tree of Guiana, C. W. Hamilton on the, 1835, 78.
Wealden formation, Dr. Mantell on the zoological characters of the, 1831–32, 587.
—— strata of the Isle of Wight, Dr. Mantell on a newly-discovered species of Unio, from the, 1844, 42.
——, on the supposed, and other beds near Elgin, by C. Moore, 1859, 264.
Weather, G. W. Hall on the connexion of the, with the tide, 1836, 41.
Weights and measures, Rev. Dr. Peacock on the Commissioners' Report for the restoration of lost standards of, 1842, 8.
—— and measures, on the use of prime numbers in, by J. Yates, 1857, 174.
——, measures, and money, General Sir C. W. Pasley on simplifying and improving, 1847, 43.
——, proposed new measures of, by General Sir C. W. Pasley, 1856, 146.
Weir, waste, and scouring sluice, J. F. Bateman on a self-acting, 1842, 110.
Well, artesian, on Southampton Common, J. R. Keele on the, 1846, 52.
Wells, on the applicability of M. Fauvelle's mode of boring artesian and other, 1846, 56.
Wenlock shale near Walsall, Prof. Buckman on the discovery of some new cystideans from the, 1847, 61.
West's (W.) engraving machine, notice of, 1840, 211.
Whale, remains of one discovered at Durham, G. T. Fox on the, 1839, 89.
——, description of the 'Ajuh,' a species of, found in a river in Central Africa, 1856, 98.

Whale-fisheries, northern, statistics relative to the, by Dr. H. Munroe, 1853, 109.
—— and seal-fisheries of Greenland and Davis Straits, carried on by vessels from Peterhead, account of the, by T. Lawrance, 1859, 216.
Wheat, G. W. Hall on the acceleration of the growth of, 1839, 86.
——, on the nutritive properties of the potato as compared with, by J. W. Rogers, 1857, 57.
——, Rev. Prof. Henslow on the rust and mildew of, 1841, 73.
——: on the transmutation of Ægilops into Triticum, by Major Munro, 1852, 68.
——, on the Ægilops as the origin of, by Rev. Prof. Henslow, 1856, 87.
——, W. C. Jones on the analysis of, 1836, 74.
——, W. Sharp on the ashes of, 1845, 36.
Wheat-grain, on the composition of, and its products, by J. B. Lawes and Dr. J. H. Gilbert, 1856, 173.
Wheat, mummy, Rev. Prof. Henslow on the supposed germination of, 1860, 110.
——, Baron Dupin and G. R. Porter on the influence of its price on population, 1836, 132, 133.
——, on the current and cost price of, during the years 1843–1854, as illustrating the value of agricultural statistics, by J. T. Danson, 1854, 134.
—— and other edibles of India and England, Col. Sykes on, 1847, 107.
Wheat-midge, Rev. Prof. Henslow on the, 1841, 72.
Wheatstone's (Prof.) speaking-machine, notice of, 1835, 6.
Wheel, triple differential, J. Lothian on a, 1847, 18.
Wheelbarrow, new, Capt. F. Wilson on a, 1853, 132.
Wheels, Prof. Willis on the teeth of, 1837, 135.
——, bevel, Mr. Davies on a machine for cutting the teeth of, 1839, 129.
——, wooden railway, T. Parkin on a new kind of, 1839, 131.
——, tangent, G. L. Molesworth on, 1857, 186.
——, toothed, and pinions, R. Roberts on the correct sizing of, 1849, 127.
Whelk, common (Buccinum undatum), J. G. Jeffreys on specimens of the, having double opercula, 1860, 117.
Whewel.'s (Rev. W.) anemometer, Rev. Dr. Robinson on a modification of, 1846, 111.
Whin-sill of Cumberland and Northumberland, W. Hutton on the, 1831–32, 76; J. A. Knipe on the, 1860, 86.
White-bait (Clupea alba) in the Frith of Forth, notice of, by Dr. R. Parnell, 1838, 109.
White lead, Mr. Benson on the theory of the formation of, 1839, 60.
Whitehouse's relay and induction coils in action on short circuit, Prof. W. Thomson on, 1857, 21.
Wiers's (Mr.) alkalimeters, 1860, 72.
Wild cattle of Chillingham Park, J. Hindmarsh on the, 1838, 100.
Wiltshire drift, Prof. Owen on the fossil musk-ox from the, 1856, 72.
Wind, Prof. Stevelly on the origin of, 1834, 565.
——, Rev. Dr. Whewell's notation for registering the, 1836, 39.
——, its effect on the intensity of sound, by Prof. Stokes, 1857, 22.
——, 'Helm,' of Crossfell, Rev. J. Watson on the, 1838, 33.
——, force of the, in July and August 1855, as taken by the "atmospheric recorder" at the Beeston observatory, by E. J. Lowe, 1855, 40.
—— and tides, on the currents produced by the action of the, by H. C. Sorby, 1855, 97.
—— and current charts, Lieut. Maury on, 1848, 34.
Wind-charts of the Atlantic, Admiral Fitz-Roy on, 1855, 39.
Winds: W. R. Birt on the probable causes of the aërial currents of the temperate zones, 1837, 34.
——: Prof. Hennessy on an instrument for observing vertical currents, 1856, 40.
—— which veer from the south-west to west, and north-west to north, R. Russell on the action of the, 1853, 32.
Wine, and other alcoholic liquors, on certain curious motions observable on the surfaces of, by Prof. J. Thomson, 1855, 16.
Winter months, G. Hutchinson on a method of prognosticating the probable mean temperature of the, from that of corresponding months in the preceding summer, 1840, 41.
—— in the northern hemisphere, T. Hopkins on the influence of mountains on temperature in the, 1841, 28.
Winters, mild, in the British Isles, Prof. Hennessy on, 1859, 50.
Wire-rope, on the origin of, its qualities and economy, by A. Smith, 1854, 162.
Wire-ropes, Count A. Breunner on their use in deep mines, 1838, 150.
Wollaston's scale of chemical equivalents, Prof. Stevelly on the application of a vernier to, 1834, 596.
—— goniometer, Prof. W. H. Miller on an alteration in the construction of, 1838, 153.
Wollaston's (T. V.) work on the insects of the Madeira Islands, notice of, 1854, 110.
Woman, on the causes which advance or retard the appearance of the first menstruation in, by Dr. Tilt, 1850, 135.
Wombat, Dr. J. E. Gray on the, 1838, 111.
Wood, Dr. West on the formation of, 1835, 75.
——, Dr. Lankester on the theory of the formation of, in plants, 1851, 72.

Wood, R. Davison on a desiccating process for the seasoning of, 1849, 114.
——, R. Scanlan on a new substance obtained from the distillation of, 1836, 76.
——, J. I. Hawkins on paving roads and streets with, 1839, 127.
——, recent and fossil, W. Nicol on the anatomical structure of, 1834, 66o.
——, Dr. G. Bird on the artificial fossilisation of, 1837, 47.
—— from the submerged forest at Wawne in Holderness, T. J. Pearsall on changes observed in, 1853, 45.
——, Prof. Hodgkinson on the power of different species of, to resist a force tending to crush them, 1839, 125.
Woodocrinus, Prof. de Koninck and E. Wood on the genus, 1857, 76.
Woodward's solar camera, A. Claudet on, 1860, 62.
Wcody tissue, Dr. Lankester on the formation of, 1839, 78.
Wool, W. Danson on the introduction of a species of Auchenia into Britain for obtaining, 1839, 92.
Woollen manufacture of England, with special reference to Leeds, E. Baines on the, 1858, 158.
Workhouses and charitab'e institutions, aphoristic notes on sanitary statistics of, by Dr. Roth, 1856, 149.
Working-classes:—results of the strike of the cotton-spinners at Preston, 1837, 140; on their condition in an extensive manufacturing district, 141; inquiry into the amount and appropriation of wages by the, 148.
—— in Hull, on the condition of the, 1841, 85.
—— in Hyde, Cheshire, statistics respecting the, 1838, 172.
—— in Rutland, on the educational condition of the, 1839, 110; on the state of the, 112.
World, on improved monographic projections of the, by J. Gall, jun., 1855, 148.
Worm, trematode, new species of, Dr. T. S. Cobbold on a, 1855, 108.
Worsted manufactures of Yorkshire, J. James on the, 1858, 182.
Wreck intelligencer, R. Smith on a, 1858, 221.
Wren's (Sir C.) cipher, containing three methods of finding the longitude, Sir D. Brewster on, 1859, 34.
Writing which has been fraudulently erased, on a method of detecting, 1831–32, 90.
Writing-tables or cabinets, improved, T. Sopwith on, 1838, 156.

Xyloidine, Dr. J. H. Gladstone on the spontaneous decomposition of, 1853, 41.
Xyloids, Dr. J. B. Edwards on, 1858, 47.
Xylophylla, B. Clarke on the foliage and inflorescence of the genus, 1846, 91.

Yachts built on the wave principle, Dr. J. Phipps on the sailing powers of, 1846, 112.
Yacoutes, Siberia, Prince Galitzin on the manners and customs of the, 1853, 80.
Yew, J. E. Bowman on its longevity and antiquity in churchyards, 1836, 101.
Yew-tree found in a bog, C. W. Hamilton on a, 1835, 76.
—— at Mucruss, Dr. Litton on the, 1835, 76.
Ystalyfera blast furnaces, J. P. Budd on the advantageous use made of the gaseous escape from the, 1850, 172.
Yttria, Prof. Mosander on, 1843, 30.

Zamia gigas, notice of, from Runswick, Whitby, 1846, 62.
Zamites gigas, from the lower sandstone and shale of the Yorkshire coast, Prof. W. C. Williamson on the restoration of, 1854, 103.
Zea Mais (Forty Days' Maize), on changes in the male flowers of, by R. A. C. Godwin-Austen, 1849, 68.
Zeros, imaginary, Prof. Young on, 1845, 1.
Zinc, Prof. E. Davy on its protection of other metals from corrosion, 1835, 36.
——, on a peculiar condition of, by Dr. Tilley, 1844, 35.
——, carbonate of, R. W. Fox on the production of a horizontal vein of, 1838, 90.
—— and copper, on the chemical examination of some alloys of, by D. Forbes, 1854, 67.
—— and copper, salts of, Prof. F. C. Calvert on the action of sulphuretted hydrogen on, 1855, 51.
—— and tin, Prof. F. C. Calvert on alloys of, 1855, 51.
Zincethyl, Prof. Frankland on, 1855, 62.
Zodiacal light, observations on, by E. J. Lowe, 1851, 24.
Zones, temperate, W. R. Birt on the probable causes of the aërial currents of the, 1837, 34.
Zoological nomenclature, on, 1844, 78.
—— notices, by the Prince of Canino, 1852, 72.
—— researches in Orkney and Shetland, by Profs. E. Forbes and J. Goodsir, 1839, 79.
Zoology of Western Africa, A. Murray on the, 1855, 114.
—— of Cornwall, J. Couch on the, 1841, 68.
—— of the island of Rathlin, Dr. J. D. Marshall on the, 1835, 68.
——, W. Ogilby on the scientific principles on which classification in the higher departments of, should be based, 1845, 62.
——, systematic: Dr. C. Collingwood on recurrent animal form, 1860, 114.
——, systematic, Prof. V. Carus on the value of development in, 1860, 125.
—— and botany, Prof. Strickland on the

true method of discovering the natural system in, 1840, 128.
Zoophyte, Profs. E. Forbes and J. Goodsir on Ellisia, a new genus of, with description of Flos maris, 1839, 81.
——: Dr. Allman on Plumatella repens, 1843, 74.
——: Prof. Redfern on Flustrella hispida, 1857, 106.
——, new (Campanularia fastigiata), J. Alder on a, 1859, 142.
——, new (Funicularia quadrangularis), notice of a remarkable, by Prof. E. Forbes, 1844, 64.
——, helianthoid, Prof. Allman on a new genus of, 1844, 66.
——, hydroid: Prof. Allman on the structure of Hydra viridis, 1853, 64, 70.
Zoophytes, Sertularian, Prof. E. Forbes on the morphology of the reproductive system of the, 1844, 68.
——, Sertularian, Prof. Wyville Thomson on the, 1852, 78.
——, Sertularian, from Port Natal, Algoa Bay, and Table Bay, in South Africa, G. Busk on the, 1858, 118.
Zoophytes, British, on some new genera and species of, by J. Alder. 1856, 90.
—— of Caithness, C. W. Peach on the, 1859, 155.
——, new, C. W. Peach on some, 1846, 86.
——, calcarecus, found at Ipswich, Harwich, &c., C. W. Peach on, 1851, 81.
——, freshwater, of Ireland, Dr. Allman on the, 1843, 77.
—— of the Isle of Wight, W. Thompson on the, 1846, 83.
—— of the vicinity of Peterhead, C. W. Peach on the, 1850, 126.
——, Scottish, J. G. Dalyell on the propagation of, 1834, 598.
——, new species of (Plumularia similis, Avenella dilatata, and Arachnidia hippothöoides), by Rev. T. Hincks, 1858, 128.
——, three new species of (Plumularia halecioides, Halecium labrosum, and H. nanum), by J. Alder, 1858, 126.
——, list of species obtained by dredging off the Mull of Cantire, 1842, 70; off the Mull of Galloway, 72.

SECTIONS.

INDEX OF PLACES.

Aberdeen, on the effects of the winter of 1854–55 upon vegetation at, by Prof. Dickie, 1855, 105.

——, vicinity of, and north-east of Scotland, on the geological structure of the, by Prof. Nicol, 1859, 116.

——, on the granite-quarries of, by A. Gibb, 1859, 235.

——, on the statistics, chiefly vital and economic, of, by J. Valentine, 1859, 226.

——, on illegitimacy in, by J. Valentine, 1859, 224.

——, on the manufactures and trade of, by G. B. Bothwell, 1859, 200.

Aberdeenshire, on the vitrified forts on Noth and Dunnideer, by Sir A. L. Hay, 1859, 179.

——, on the mollusca of, by Prof. Dickie, 1859, 147.

——, on the upper limits of cultivation in, by Prof. Dickie, 1859, 133.

——, on the flora of, by Prof. Dickie, 1859, 134.

——, on the agricultural statistics of, by A. Harvey, 1859, 210.

——, on the connexion of the granite with the stratified rocks in, by T. F. Jamieson, 1859, 114.

——, on the remains of the cretaceous formation, &c. in, by Rev. Dr. Longmuir, 1859, 262.

——, notice of the flints of, 1834, 651.

Abergele, on the geology of Llysfaen and Penmaen Rhos, near, 1854, 93.

Abessinia, on the physical character of the table-land of, by Dr. C. T. Beke, 1846, 70.

——, on the origin of the people called 'Gallas,' by Dr C. T. Beke, 1847, 113.

——, on the geographical distribution of the languages of, and the neighbouring countries, by Dr. C. T. Beke, 1848, 94.

Abyssinia, on a plant used in, as a remedy for tape-worms, by Dr. Hodgkin, 1844, 85.

Aden, meteorological observations made at, by Sergeant W. Mayes, 1843, 22; 1846, 26.

Ægean Sea, on two remarkable invertebrata inhabiting the, by Prof. E. Forbes, 1841, 72.

——, on the influence of temperature upon the distribution of the fauna in the, by Lieut. Spratt, 1848, 81.

Africa, outline of three expeditions which might be undertaken to explore the interior of, by Sir J. E. Alexander, 1840, 121.

Africa, the eastern coast the best for exploration of the interior of, by Dr. C. T. Beke, 1846, 72.

——, explorations in, by C. J. Anderson, 1855, 146.

——, on the population of certain parts of, 1840, 185.

——, on the natives of Old Calabar, by Prof. Daniell, 1845, 79.

——, on the Ghá nation of the Gold-coast of, by Rev. A. W. Hanson, 1849, 85.

——, on the ethnography of, as determined by its languages, by Dr. R. G. Latham, 1844, 79.

——, on certain new vocabularies from the eastern coast of, by the Chevalier Bunsen, 1847, 119.

——, on geological phenomena in, by J. F. Duncan, 1846, 69.

——, on the Shea butter-tree growing in, by J. F. Duncan, 1846, 90.

——, on crystals from the sea-coast of, by T. J. Pearsall, 1853, 45.

——, Central, on the probability of the river Tchadda being the outlet of the lake Tchad, by Capt. Allen, 1838, 99.

——, Central, on discoveries in, and reasons for continued research, by Dr. W. B. Baikie, 1856, 105.

——, Eastern, on the resources of, by J. L. M'Leod, 1859, 188.

——, North, on Dr. Overweg's discovery of Devonian rocks in, by Prof. E. Forbes, 1851, 58.

——, tropical, notice of Dr. Livingstone's journey across, 1855, 148.

——, Southern, notice of Dr. Livingstone's return-journey across, 1856, 113.

——, South-Central, notice of Dr. Livingstone's discoveries in, 1860, 164.

——, South-east, journey to St. Lucia Bay, and the adjacent country in, by R. W. Plante, 1853, 90.

——, Western, on the zoology of, by A. Murray, 1855, 114.

——, Western, account of a Mandingo, native of Nyáni-Marú in, by Capt. Washington, 1838, 97.

Aire, valley of the, at Leeds, on the super-

ficial deposits of the, by T. P. Teale, 1858, 111.
Aire Valley, near Leeds, on the remains of the Hippopotamus found in the deposit in the, by H. Denny, 1853, 51.
Alatou, in Chinese Tartary, notes of a journey through parts of the, by T. W. Atkinson, 1858, 144.
Aldan Mountains, North Asia, Prof. A. Erman on the, 1842, 46.
Algeria, on the geological system of the Central Sahara of, by Rev. H. B. Tristram, 1860, 102.
Algiers, on the vegetable productions of, by G. Munby, 1849, 71.
Algoa Bay and Table Bay, South Africa, on Sertularian zoophytes and Polyzoa from, by G. Busk, 1850, 118.
Alleghany Mountains, on the bituminous coal-field on the western slope of the, by H. Phillips, 1837, 96.
Alleghanies, Virginia, on the geology of the, by Prof. W. B. Rogers, 1849, 65.
Almorness Head, Kirkcudbrightshire, on the occurrence of graphite at, by Prof. Harkness, 1852, 50.
Alps, on systematic observations of temperature in the, by J. Ball, 1860, 37.
——, on a set of relief models of the, by Capt. Cybulz, 1860, 155.
——, Bavarian, on klinology in reference to the, by Dr. Schafhaeutl, 1851, 69.
——, Savoy, on circular chains in the, by A. Favre, 1860, 78.
Alston Moor, on the mountain-limestone formation in, by T. Sopwith, 1838, 79; on the strata of, by J. Leithart, 38.
Alten in Finmark, notice of meteorological observations made at, 1844, 27, 28; 1846, 12; 1847, 34; 1848, 32; 1849, 18.
——, on the aurora borealis at, 1846, 12.
——, on the advantages to be derived from the establishment of a magnetic and electro-meteorological observatory at, by Dr. J. Lee, 1847, 34.
—— and Greenwich, on the difference of longitude between, by Prof. Struve, 1847, 46.
Amazon, on the resources of the territory of the, by S. Jackson, 1857, 145.
America, on the ante-Columbian discovery of, by Prof. Elton, 1848, 94.
——, on the geography of the north-west coast of, by R. King, 1842, 44.
——, on the southern limits of the Esquimaux race in, by Dr. R. G. Latham, 1844, 78.
——, on the ethnography of, by Dr. R. G. Latham, 1845, 77.
——, on the languages of, by H. R. Schoolcraft, 1844, 83.
——, on steam navigation in, by Rev. Dr. Scoresby, 1844, 97.
——, on the partridges of, by J. Gould, 1844, 61.
——, on the coal-fields of, by Prof. H. D. Rogers, 1848, 74.
America, on terraces and ancient sea-beaches, especially those on the Connecticut River, &c., by Rev. Dr. Hitchcock, 1850, 87.
——, on new species of fossil saurians found in, by Dr. Harlan, 1833, 440.
——, memoranda on storms and tornadoes in, by W. C. Redfield, 1840, 40.
——, on fog-rings observed in, by Sir D. Brewster, 1845, 19.
——, on the vital statistics of, by Dr. Laycock, 1845, 90.
——, on "equitable villages" in, by W. Pare, 1855, 183.
—— and England, on telegraphic communication between, by F. Bakewell, 1854, 147.
——, North, British, on the caverns of Canada, by Dr. G. D. Gibb, 1859, 106.
——, North, British, on the geology of Capt. Palliser's expedition in, by Dr. Hector, 1860, 80.
——, North, British, on the geography of, particularly British Columbia, Frazer River, &c., by Dr. N. Shaw, 1858, 153.
——, North, British, physical geography of the country examined by the expedition exp'oring the S.W. regions of, by Capt. Palliser and Dr. Hector, 1858, 153.
——, on the formation of a railway from the Atlantic to the Pacific Ocean, through, by A. Whitney, 1858, 154.
——, North, British, on a proposed railway communication from the Atlantic to the Pacific, in the territories of, by A. Doull, 1851, 111.
——, North, British, on the most rapid communication with India through, by Major Synge, 1852, 114.
——, North, on the plan adopted by the Smithsonian Institution for investigating the meteorology of, 1852, 26.
——, North, on the meteorology of, by R. Russell, 1855, 42.
——, North, on the climate of, by Dr. Daubeny, 1838, 29.
——, on the geology and thermal springs of, by Dr. Daubeny, 1838, 91.
——, North, on the production of sand-storms and lacustrine beds, by causes associated with the lakes of, by Rev. Mr. Schoolcraft, 1842, 42.
——, North, on the excavation of the rocky channels of rivers in, by the recession of their cataracts, by G. W. Featherstonhaugh, 1844, 45.
——, North, on the delta and alluvial deposits of the Mississippi, and other points in the geology of, by Sir C. Lyell, 1846, 117.
——, North, on the physical structure of the Appalachian chain, by Profs. H. D. and W. B. Rogers, 1842, 40.
——, North, on the palæozoic strata of, by Prof. H. D. Rogers, 1856, 175.
——, North, on the geology of the West-

ern States of, by Dr. D. D. Owen, 1842, 44.
America, North, on the tendency of European races to become extinct in, by E. Clibborn, 1856, 136.
——, North, on crania found in the ancient mounds of, by Dr. Warren, 1837, 108.
——, South, on great earthquakes on the west coast of, by Dr. M. Hamilton, 1840, 123.
——, South, on earthquakes in, by Dr. M. Hamilton, 1850, 82.
——, South, on the Amazon and Atlantic water-courses of, by Señor Susini, 1855, 155.
——, South, on a rare animal from, by Col. Sykes, 1838, 104.
——, South, on some fossil mammalia of, by Prof. Owen, 1846, 65.
——, South, on the various modes of fishing by the Indians in the west of Guiana, by Sir R. Schomburgk, 1840, 135.
Amlwch copper-mines, Anglesey, on the torrefaction of yellow copper pyrites at the, by Dr. Henry, 1831-32, 78.
Amoor River, Dr. W. G. Backie on the, 1858, 147.
Andes, notice of new species of humming-birds from the, 1846, 79.
——, on the ancient inhabitants of the, by J. B. Pentland, 1834, 623.
Anglesea, dredging-operations on the coast of, by R. M'Andrew and Prof. E. Forbes, 1844, 63.
Angoxa, kingdom of, in Eastern Africa, on the resources of the, by J. L. M'Leod, 1859, 191.
Antarctic Ocean, on the diatomaceous vegetation of the, by Dr. J. D. Hooker, 1847, 83.
Antigua, on the earthquake (Feb. 1843) at the island of, by Hon. Capt. Carnegie, 1843, 59.
Antrim and Down, on the origin, characteristics, and dialect of the people in the counties of, by Rev. Dr. Hume, 1852, 89.
—— and Down, on the geological structure of the counties of, by J. Bryce, 1852, 42.
—— and Down, on the fossiliferous beds of, by J. MacAdam, 1852, 53.
Appalachian Chain of North America, on the physical structure of the, by Profs. H. D. and W. B. Rogers, 1842, 40.
—— rocks of North America, on the, by Prof. H. D. Rogers, 1856, 177.
—— sea, evidences of an extensive paroxysmal revolution in the physical geography and organic inhabitants of the, at the end of the Matinal period, by Prof. H. D. Rogers, 1856, 178.
Arabia, observations with the thermometer made at Aden in, 1843, 22.
Ararat, Mount, M. Khanikoff on his ascent of, 1851, 88.
Arbroath, on the fall of rain at, by A. Brown, 1855, 30.
Arbroath, on the flux and reflux of the sea, July 5, 1843, at, by A. Brown, 1843, 18.
Arctic regions, on the distribution of animal life in the, by A. Petermann, 1852, 112.
Ardoch, on the Roman camp at, and the military works near it, by Col. Sir H. James, 1859, 183.
Ardrossan, on the geology of Castle Hill, by W. Keir, 1840, 95.
Argyleshire, C. Maclaren on traces of ancient glaciers in Glenmessan, 1850, 90.
Arran, on certain trap-dykes in, by Prof. Phillips, 1855, 94.
——, on the geology of the island of, by Prof. Ramsay, 1840, 92.
Ash Hole, Berryhead, on the cave of, by Mr. Bartlett, 1841, 61.
Ashiesteel, on the rubble bridge of, by J. Smith, 1850, 187.
Asia Minor, on a railroad through, by W. F. Ainsworth, 1852, 100.
Asia, Central, on the volcanos of, by T. W. Atkinson, 1858, 75.
——, Central, on the aboriginal tribes of, by R. von Schlagintweit, 1860, 176.
——, Central, on the Russian trade with, by T. Michell, 1859, 186.
——, North, contributions to a geological sketch of, by Prof. A. Erman, 1842, 46.
——, North, on the Aldan Mountains of, by Prof. A. Erman, 1842, 46.
Askern, Doncaster, on the springs of, by W. West, 1844, 105.
Assyria, on the language of, the mode of writing of the Assyrians, and the language of the people who invented this mode of writing, or, as they have been called, the Accadians, by Rev. Dr. E. Hincks, 1857, 134.
Asturias, on the coal-deposits of the, by S. P. Pratt, 1845, 49.
Atlantic and Pacific Oceans, on the communication between the, by G. Moro, 1844, 58.
—— to the Pacific, on a proposed railway from the, in the territories of British North America, by A. Doull, 1851, 111.
—— to the Pacific Ocean, on the formation of a railway from the, through British North America, by A. Whitney, 1858, 154.
—— and Pacific Oceans, on the currents of the, by A. G. Findlay, 1853, 76.
——, Northern, on the meteorology of the, by T. Hopkins, 1842, 26.
——, North, and northern oceans, on the surface-temperature and great currents of the, by Rev. Dr. Scoresby, 1853, 18.
——, North, on wind and current charts of the, by Lieut. Maury, 1848, 34
——, wind-charts of the, Admiral FitzRoy on, 1855, 39.
——, declination chart for the, by S. Beswick, 1850, 3.
—— islands of the, on the molluscous

fauna of the, by Prof. E. Forbes, 1851, 76.
Aulaga Lake, and its drainage in the desert of Caranjas, in Bolivia, Dr. M. Hamilton on the, 1854, 120.
Aust Cliff, on the Severn, notice of a large cylindrical bone found in the bone-bed of, by S. Stutchbury, 1849, 67.
——, Gloucestershire, on a supposed fossil Fucus found at, by Prof. C. C. Babington, 1856, 83.
Australia, on the geological structure of, by J. B. Jukes, 1846, 68.
——, on the climate of the Gulf of Carpentaria, by T. Saunders, 1853, 91.
——, on the interior of, by A. Petermann, 1853, 89.
——, on crania of the aborigines of, by Prof. J. H. Corbett, 1857, 126.
——, on the mammalia of, by Dr. J. E. Gray, 1841, 69.
——, on the growth and commercial progress of, by P. L. Simmonds, 1855, 188.
——, on the trade and progress of the colony of Victoria, by Hon. T. M'Combie, 1859, 218.
——, on gold-nuggets from, by Prof. Tennant, 1859, 85.
——, North-western, on the physical geography of, by J. S. Wilson, 1858, 155.
——, South, notice of the human skull used as a drinking-vessel by the aboriginals of, 1844, 77.
——: on the eastern limits of the aborigines and their language, by Dr. R. G. Latham, 1844, 80.
Ava, India, Sir D. Brewster on a remarkable specimen of amber from, 1834, 574.
Avon, Tiverton, on a suspension-bridge over the, by T. Motley, 1838, 157.
Axmouth, on the great landslip of, by Mr. Dawson, 1841, 64.
Ayreshire, on some fossils from, by Prof. Wyville Thomson, 1853, 61.
Azores, on the molluscous fauna of the, by Prof. E. Forbes, 1851, 76; 1854, 108.

Baalbec, on the supposed biblical names of, and on the position of Baalgad, by J. Hogg, 1857, 143.
Babylon, notice of the French scientific expedition to, 1855, 148.
Bacon Hole, Gower, on fossil remains discovered in, by C. Spence Bate, 1848, 62.
Balkan, or Mount Hæmus, on a journey to the, from Constantinople, by Lieut.-Gen. Jochmus, 1853, 84.
Ballymacadam, co. Tipperary, on the tertiary clay and lignite of, by A. B. Wynne, 1857, 94.
Baltic, on the apparent fall or diminution of water in the, by Major N. L. Beamish, 1843, 59.
——, on some coloured water from the, by Dr. Lankester, 1840, 143.
Bantry Bay, on the numerous traces of glacier-friction on the north-west side of, by G. B. Airy, 1843, 62.
Barbados, on the geological structure of, and on Ehrenberg's Polycystina from, by Sir R. Schomburgk, 1847, 70.
Barbary, notes on the geology and fossils of the coast of, by G. F. Habershon, 1857, 67.
Barnstaple Bay, notice of a remarkable elevated beach on the north side of, 1836, 96.
Bath and Bristol, on railway sections between, by W. Sanders, 1841, 67.
Bavaria, on the system of meteorological observations in, by Dr. Lamont, 1840, 27.
Bavarian Alps, on klinology in reference to the, by Dr. Schafhaeutl, 1851, 69.
Bazarutto Islands, Eastern Africa, J. L. M'Leod on the, 1859, 189.
Beddgelert, Carnarvon, meteorological observations taken at, by J. Prichard, 1842, 25; meteorological register for 1842–43 at, 1843, 20.
Belfast, comparison of the periods of the flowering of plants in the Botanic Garden of, and the Jardin des Plantes at Paris, by W. Thompson, 1846, 90.
——, harbour of, on the improvements in the, by R. Garrett, 1852, 126.
——, on the shells found in the alluvial deposits of, by J. Grainger, 1852, 43, 74.
—— and Enniskillen, comparison of the rain which fell at, from July 1843 to July 1844, by W. Thompson, 1844, 14.
——, on the sanitary state of, by Dr. A. G. Malcolm, 1852, 119.
——, on the influence of factory life on the health of the operatives at, by Dr. A. G. Malcolm, 1855, 171.
Belgium, on the mines and mining industry of, by R. Valpy, 1846, 100.
——, on free trade in, by C. Maeren, 1858, 184.
Bengal, meteorological observations made in 1850 at Futtegurh, in the north-west provinces of, by J. C. Pyle, 1851, 39.
——, statistics of hospitals for the insane in, by Col. Sykes, 1844, 89.
——, statistics of civil justice in, by Col. Sykes, 1848, 116.
——, revenue statistics of the Agra Government, or north-west provinces of, by Col. Sykes, 1847, 109.
——, Lower, on the inhabitants of, by R. Young, 1851, 95.
Berber, on the Ghadamsi dialect of, by Prof. Newman, 1847, 124.
Berwick, North, on the manner in which trap or igneous rocks intrude into the sandstone and conglomerate near, by General Portlock, 1850, 101.
Berwickshire, on the geology of, by D. Milne, 1834, 624.
Berwyn Mountains, North Wales, on a plateau of igneous rocks on the east flank of the, by J. E. Bowman, 1840, 100.

Bessarabia, on the Nekrasowzers of, by Dr. W. Twining, 1846, 115.
Birkenhead, on the growth of its population, by J. T. Danson, 1856, 143.
Birmingham, queries respecting the gravel in the neighbourhood of, by H. E. Strickland, 1839, 71.
——, on some indications of the anemometer at, by A. F. Osler, 1839, 17.
——, on the commercial statistics of, by a local Committee, 1839, 114.
——, on the educational statistics of, by a local Committee, 1839, 111.
——, on the medical statistics of, by a local Committee, 1839, 115.
Bohemia, Silurian system of, Sir R. I. Murchison's review of M. Barrande's labours in preparing his work on the, 1850, 97; Trilobites of the Silurian rocks of, 99.
Bolivia, on the importance of the navigation of the river Plata to, by H. C. Dwerhagen, 1853, 73.
——, on the lake Aulaga and its drainage in the desert of Caranjas in, by Dr. M. Hamilton, 1854, 120.
Bolton, borough of, on the state of education in the, by Mr. Ashworth, 1837, 138.
Bolton-le-Moors, on the epidemic influenza at, with a meteorological register of the weather, by Dr. Black, 1837, 115.
Bombay, on a remarkable storm at, by Col. Sykes, 1848, 41.
——, rain-table, from 1817 to 1847, at, 1848, 47.
——, meteorological observations taken at Fort George Barracks, by Sergeant W. Mayes, 1846, 26.
——, on the magnetic and meteorologic observatory at, by A. B. Orlebar, 1847, 28.
——, on the physical geography of the neighbourhood of, as affecting the water-supply of that city, by H. Conybeare, 1858, 149.
——, statistics of criminal and civil justice under the government of, by Col. Sykes, 1850, 159.
——, on the census and condition of the island of, by Col. Sykes, 1852, 120.
Bonin Islands, A. G. Findlay on the, 1856, 111.
Bosphorus, Crimean, researches in the, by Dr. D. Macpherson, 1856, 115.
Botocudo vocabulary, Dr. R. G. Latham on the, 1847, 123.
Bourne, valley of the, on the peat of the, by Rev. W. B. Clarke, 1837, 94.
Bracklestone Bay, Sussex, fossils of, 1846, 67.
Bradford, Yorkshire, analysis of the springs to the north and west of, by W. West, 1844, 107.
Bray Head and Howth, on the zoological relations of the Cambrian rocks of, by Prof. J. R. Kinahan, 1857, 75.
Brazil, North, on the geology and fossil fishes of, by G. Gardner, 1840, 118.
Breslau, Silesia, on the Silurian rocks at Ober and Neu Schmollen, near, by F. Oswald, with remarks by Sir R. I. Murchison, 1845, 47.
Bristol, on the statistics of popular education in, by C. B. Fripp, 1836, 136; 1841, 89.
——, report on the condition of the working-classes in, by a Committee, 1839, 121.
——, on an additional species of Saurian found at Durdham Down, near, by Dr. H. Riley and S. Stutchbury, 1836, 90.
——, on the discovery of the remains of fishes at the base of the mountain-limestone, near, by Rev. D. Williams, 1842, 60.
——, account of a raised sea-beach at Woodspring Hill, by W. Sanders, 1840, 102.
—— and Bath, on railway sections between, by W. Sanders, 1841, 67.
—— and Taunton, on railway sections made on the line of the Great Western railway, between, by W. Sanders, 1846, 59.
Britain, flora of, its comparison with that of other countries, by Miss Twining, 1847, 87.
British coasts, on the importance of the herring-fishery on the, by J. M. Mitchell, 1860, 191.
British Islands, on the passage of storms across the, by R. Russell, 1850, 42.
——, on the storms of the, by Admiral FitzRoy, 1860, 39.
——, on the distribution of heat over the surface of the, by Prof. Hennessy, 1857, 30.
——, on mild winters in the, by Prof. Hennessy, 1859, 50.
——, on the cause of the mild winter temperature of the, by T. Hopkins, 1857, 144.
——, on the temperature of the, and its influence on the distribution of plants, by A. Petermann, 1849, 26.
——, on a physico-geographical survey of the, particularly in relation to agriculture, by W. D. Cooley, 1846, 72.
——, J. A. Knipe's geological map of the, 1844, 55.
British seas, on the pulmograde Medusæ of the, by Prof. E. Forbes, 1846, 84.
Brittany and the Bretons, statistics of, by J. Fletcher, 1848, 114.
Brussels, on the establishment of a central statistical commission in, by Prof. Quetelet, 1841, 98.
Buenos Ayres and Bolivia, on the importance of the navigation of the river Plata and its ramifications to, by H. C. Dwerhagen, 1853, 73.
Builth, on a section through the Silurian rocks in the vicinity of, by Sir H. T. De la Beche, 1844, 46.
—— and Pen-y-bont, Radnorshire, on some points connected with the physical geology of the Silurian district between, by Prof. A. C. Ramsay, 1848, 73.
Burdiehouse, on the limestone of, by Dr. Hibbert, 1834, 644; on the fossil fishes of, 648.

Bury, Lancashire, summary of schools and scholars in the borough of, 1835, 121.

Cadiz, on the statistics of vitality in, by Col. Sykes, 1838, 174.
Caithness, on chalk flints and oolitic fossils from the boulder-clay in, by Hugh Miller, 1850, 93.
——, on a new form of ichthyolite discovered by C. W. Peach in the flagstones of, by Sir P. de M. G. Egerton, 1860, 78.
——, on the submerged forests of, by J. Cleghorn, 1859, 101.
——, on some new fossils from the old red sandstone of, by J. Miller, 1859, 115.
——, on fossil fish, new to the old red sandstone of, by C. W. Peach, 1859, 120.
——, on the zoophytes of, by C. W. Peach, 1859, 155.
Calabar, Old, on the zoology of, by A. Murray, 1855, 115.
——, Old, on a new species of Galago (Galago murinus) from, by A. Murray, 1859, 153.
——, Old, on the skull of a Manatus senegalensis (sea cow), by W. Oliphant, 1855, 116; some account of the Egbo Society of, 117.
——, Old, on the skull of a Manatee from, by Dr. J. M'Bain, 1859, 150.
——, Old, on the natives of, by Prof. Daniell, 1845, 79.
Calcutta, Prof. Ansted on the coal districts of the neighbourhood of, 1846, 63.
——, on the mortality of, by Col. Sykes, 1844, 88.
Caldbeck Fell, on the native diarseniate of lead of, by Prof. T. Thomson, 1838, 46.
——, on the geology of, and the lower sedimentary rocks of Cumberland, by Prof. Harkness, 1857, 67.
Calder, valley of the, on the occurrence of boulders in the, by J. T. Clay, 1842, 55.
Caledonia, New, on the ethnology of, by A. K. Isbister, 1849, 85.
California, on the gold regions of, by Sir R. I. Murchison, 1849, 60.
——, on the phenomena exhibited by the Geysers of, by Dr. S. Macadam, 1854, 73.
——, on the growth and commercial progress of, by P. L. Simmonds, 1855, 138.
Cambridge, University of, on the comparative number of degrees taken in the 17th and 19th centuries, by J. Heywood, 1845, 86.
—— and Oxford, on the comparative statistics of the Universities of, in the 16th, 17th, and 19th centuries, by J. Heywood, 1842, 99.
——, on the geology of the neighbourhood of, including the formations between the chalk escarpment and the Great Bedford Level, by Rev. Prof. Sedgwick, 1845, 40.
——, on remains of new and gigantic species of Pterodactyle (P. Fittoni and P. Sedgwickii) from the upper greensand near, by Prof. Owen, 1858, 98.
Cambridge, on the pterodactyles of the coprolite-bed near, by Rev. J. B. P. Dennis, 1860, 76.
——, on modern deposits connected with the drainage of the country in the neighbourhood of, by Rev. Prof. Sedgwick, 1845, 44.
——, on the jaws of the Ichthyosaurus from the chalk near, by Mr. Carter, 1845, 60.
Cambridgeshire, on the geographical distribution of the plants of, by Rev. Prof. Henslow, 1831–32, 606.
——, on the turf of the fens of, by Rev. L. Jenyns, 1845, 75.
Canada, short notice of the progress of natural science in, by P. P. Carpenter, 1860, 109.
——, on the annual increase of property, and of exports and imports in, by J. Hume, 1848, 112.
——, on the geology and mineralogy of, by Capt. Baddeley, 1840, 114.
——, on the caverns of, by Dr. G. D. Gibb, 1859, 106.
——, on the age of the copper-bearing rocks of Lakes Superior and Huron, and on the physical character of, by W. E. Logan, 1851, 59.
—— on the fossils of the lower and upper Silurian rocks of, by J. W. Salter, 1851, 62.
——, on the climate of, by Dr. Daubeny, 1838, 29.
—— and the United States, on the meteorology of, by R. Russell, 1855, 42.
Canary Islands, on the stature of the Guanches, the extinct inhabitants of the, by Dr. Hodgkin, 1844, 81.
Cantire, Argyleshire, on the geology of the southern extremity of, by Prof. Nicol, 1850, 100.
——, Mull of, results of deep dredging near Sana Island, off the, 1842, 70.
Cape Farewell, on the geographical position of, by Dr. West, 1835, 66.
Cape of Good Hope, observations on stars and nebulæ at, by Sir J. F. W. Herschel, 1838, 17.
Cape frontier, notice of fossils and plants collected at Sunday River, on the, 1851, 68.
Cape de Verd islands, on the use of the Bofareira (Ricinus communis) as a means adopted by the natives to excite lactation, by Dr. J. O. M'William, 1850, 132.
Cardiganshire, on the origin of the physical outline of a portion of, by Prof. A. C. Ramsay, 1847, 66.
Carlisle, on the red sandstone of, by N. Wood, 1838, 78.
——, on the rain-fall at Harraby, near, by J. Atkinson, 1841, 30.
Carnac (Brittany), on some remarkable primitive monuments at or near, and on the discrimination of races by their local and fixed monuments, by Dr. Blair, 1849, 82.

Carnarvonshire, on the geology of, by Rev. Prof. Sedgwick, 1831–32, 591.
——, meteorological register taken at Beddgelert, 1843, 20.
Carpentaria, Gulf of, in N. Australia, on the climate of the, by T. Saunders, 1853, 91.
Caucasus, and parts of the Crimea, D. Seymour on the, 1854, 124.
Cavan, Ireland, on a patch of granite in the co. of, by Lieut. Stotherd, 1835, 58.
——, on the Silurian anthracite of, by Prof. Whitty, 1854, 95.
Cefn, Denbighshire, on the bone-cave at, by J. E. Bowman, 1836, 88.
—— cave, notice of the remains found in the, 1837, 96.
—— cave, on the remains of mammalia found in the, by J. Trimmer, 1838, 86.
Channel Islands, on the botany of the, by C. C. Babington, 1838, 117.
——, on the geology of the, by R. A. C. Godwin-Austen, 1849, 49.
Charlemont, Staffordshire, on a continued spontaneous evolution of gas at, by S. Howard, 1849, 38.
Charnwood Forest, ethnographical note on the vicinity of, by Prof. Phillips, 1848, 99.
Chat Moss, Lancashire, on the drainage of a portion of, by G. W. Ormerod, 1848, 72.
——, on the gradual subsidence of a portion of the surface of, by drainage, by G. W. Ormerod, 1850, 101.
Chatsworth, on the great fountain at, by Sir J. Paxton, 1844, 102.
Cheddar, Somersetshire, description of a bone-cave at, 1838, 85.
Cheltenham, on the discovery of insects in the lower beds of the lias of, by Rev. P. B. Brodie, 1842, 58.
——, on the salts actually present in the mineral waters of, by Dr. J. H. Gladstone, 1856, 51.
——, statistics of, by R. Beamish, 1856, 129.
Chersonese, Cimbric, on the distribution of population in the, by Dr. N. Shaw, 1847, 79.
Cheshire, statistics of poor-relief and movement of population in the commercial district in the hundred of Wirral, 1854, 142.
——, statistics of the working classes in the township of Hyde, 1838, 172.
Chile, on the great earthquake in, on April 2, 1851, by R. Budge, 1851, 85.
Chillingham Park, on the wild cattle of, by J. Hindmarsh, 1838, 100.
China, on the mountain districts of, and their aboriginal inhabitants, by W. Lockhart, 1860, 168.
——: on the astronomy of the Chinese, by J. B. Lindsay, 1859, 35.
——, on the river Yang-tse-Kiang, and the Hwang-ho, or Yellow River, by W. Lockhart, 1858, 152.
——, on the Yang-tse-kiang and its future commerce, by Capt. S. Osborn, 1859, 196.
China: on our policy as regards the Chinese, in Canton, by Sir J. F. Davis, 1857, 129.
——, on the black and green teas of, by Prof. Royle, 1852, 69.
Chinese Tartary, notes of a journey through parts of the Alatou, in, by T. W. Atkinson, 1858, 144.
Christiania, meteorological observations at, 1845, 19; 1846, 12; 1847, 33; 1849, 18.
——, on certain phenomena connected with the junction of granitic and transition rocks near, by Sir C. Lyell, 1837, 67.
Cirencester, on some chemical facts connected with the tessellated pavements discovered at, by Prof. Buckman, 1850, 48.
——, on some antiques found at, as evidence of the domestic manners of the Romans, by Prof. Buckman, 1856, 108.
Clare, Ireland, on annelid-tracks from the representatives of the millstone grits in the county of, by Prof. Harkness, 1854, 86.
Clashbennie, notice of a drawing of a large fish from the old red sandstone of, 1836, 94.
Cleveland, north-western, catalogue of birds observed in, by J. Hogg, 1844, 59.
Closeburn, on the limestone of, by C. G. S. Menteath, 1834, 651.
—— Basin, Dumfriesshire, on the formation of the, by J. A. Knipe, 1840, 98.
Clyde, on the ossiferous beds in the basin of the, by Dr. Hibbert, 1834, 642.
——, on the tides of, and improvement of the navigation of the, by D. Mackie, 1837, 8.
——, Firth of, on new forms of Diatomaceæ from the, by Prof. Gregory, 1856, 83.
——, on the chemical composition of the waters of the, by Dr. S. Macadam, 1855, 64.
——, on the fauna of the, by Rev. Dr. C. P. Miles, 1855, 114.
—— River, notice of Logan's section of the bed of the, 1840, 121.
—— River, on the velocity of the tidal wave of the, by W. Bald, 1840, 49.
—— River and harbour, Dr. Strang on the, 1850, 163.
——, on the advantages arising from the improvement of tidal rivers, as exemplified by the state of the, by Dr. Strang, 1857, 167.
——, on the progress and extent of steamboat building in the, by Dr. Strang, 1852, 120.
Cochin-China, notes on the population and products of, by Consul Parkes, 1855, 149.
Collyweston, near Stamford, on the Stonesfield slate at, by Rev. P. B. Brodie, 1850, 74.
Columbia, British, on the geography of, by Dr. N. Shaw, 1858, 153.
Connecticut River, and its tributaries in New England, on terraces and ancient seabeaches on the, by Rev. Dr. Hitchcock, 1850, 87.
Constantinople and Brousa, note on a geo-

logical survey of the region between, in search of coal, 1855, 94.
Constantinople, on the plague in, by Mr. Urquhart, 1837, 139.
Conway River, N. Wales, on the pearls, plants, shells, and crustacea of the, by R. Garner, 1856, 92.
Coorg, Western Ghâts of India, on the meteorology of the province of, by Col. Sykes, 1842, 22.
Corfu, on the geology of, by Gen. Portlock, 1843, 57.
—— and the Ionian Islands, notice of Capt. Drummond's catalogue of the birds of, 1843, 70.
Cork, on the jointing and dolomitization of the lower carboniferous limestone in the neighbourhood of, by Prof. Harkness, 1857, 68.
——, chemical suggestions on the agriculture of, by F. Jennings, 1843, 38; on some geological phenomena in the vicinity of, 51.
——, on some beds of limestone in the valley of, by Dr. C. Y. Haines, 1843, 51.
—— and Kerry, on the cleavage of the Devonians of the counties of, by Profs. Harkness and Blyth, 1855, 82.
——, on the minerals of, by R. W. Townsend, 1843, 38.
——, on the insects of the county of, by W. Clear, 1843, 76.
——, on the vertebrata of the county of, by Dr. Harvey, 1843, 68.
——, mollusca of the county of, 1843, 71.
——, on the plants found near, by Dr. Power, 1843, 79.
——, notice of the phanerogamous and cryptogamous plants of the co. of, 1843, 79.
——, notice of three additions to the flora of, by Prof. Babington, 1843, 79.
——, on the lichens of, by Dr. Wood, 1843, 79.
——, statistical returns of the North Infirmary, by Dr. Popham, 1843, 84.
——, statistical report of the parish of St. Michael, by Major N. L. Beamish, 1843, 87.
——, statistics of the parish of Kilmurry in the co. of, 1843, 93.
Cornwall, on the agricultural products of, by Sir C. Lemon, 1841, 83.
——, on the fauna of, by C. W. Peach, 1845, 65; 1847, 78.
——, on the zoology of, by J. Couch, 1841, 68.
——, on the marine zoology of, by C. W. Peach, 1846, 86.
—— and Devon, on the flora of, by Rev. W. S. Hore, 1841, 75.
——, on recent changes of sea-level on the south coast of, by R. A. C. Godwin-Austen, 1850, 71.
——, on the post-tertiary formations of, by Mr. Bartlett, 1841, 61.
—— and South Devon, on the geological horizon of the rocks of, by Rev. D. Williams, 1839, 68.
Cornwall and Devon, on the chronological and geographical distribution of the Devonian fossils of, by J. Pengelly, 1860, 91.
——, on the fossil geology of, by C. W. Peach, 1849, 63.
——, on the fossil organic remains of the south-east coast of, by C. W. Peach, 1841, 61.
——, on the fossils of Polperro, by C. W. Peach, 1843, 56.
——, on the metalliferous veins of, by Sir H. T. De la Beche, 1836, 83.
——, on the mineral veins of, 1831-32, 586.
——, on some intersections of veins in the mines of Dolcoath and Huel Prudence in, by W. J. Henwood, 1837, 74.
——, on the higher temperature of the slate than of the granite of, by W. J. Henwood, 1837, 36.
——, on the performance of steam-engines in, by J. S. Enys, 1836, 130.
——, on the connexion which exists between improvements in pit-work and the duty of steam-engines in, by J. S. Enys, 1841, 103.
——, on the duty of steam-engines in, by J. Taylor, 1835, 108.
Corstorphine Hills near Edinburgh, on the striated rocks of, by Sir R. I. Murchison, 1842, 53.
Cos, island of, on a remarkable phenomenon presented by the fossils in the freshwater tertiary of the, by Prof. E. Forbes and Lieut. Spratt, 1845, 59.
Courland, on certain ethnological questions connected with the coast of, by Dr. R. G. Latham, 1853, 86.
Coventry, some statistics of the Provident Dispensary at, by C. H. Bracebridge, 1858, 170.
Crete, notice of Capt. Drummond's catalogue of the birds of, 1843, 70.
Crickhill, Yorkshire, saline contents of the sulphureous spring at, 1844, 107.
Crimea, on the flowers and vegetation of the, by Dr. Michelson, 1855, 106.
——, on fossils from the, and a sketch of the formations represented in that country, by W. H. Baily, 1856, 60.
——, on parts of the, by D. Seymour, 1854, 124.
Crimean Bosphorus, researches in the, and on the site of the ancient Greek city of Panticapæum (Kertch), by Dr. D. Macpherson, 1856, 115.
Crossfell Mountains, on the 'helm wind' of the, by Rev. J. Watson, 1838, 33.
Cultra, on the Permian fossils of, by Prof. W. King, 1852, 53.
Cumberland, on the fall of rain in the Lake districts of, by J. F. Miller, 1846, 18.
——, on a basaltic dyke in the Vale of Eden, by J. A. Knipe, 1839, 67.
—— and Northumberland, on the Tynedale coal-field and the whin-sill of, by J. A. Knipe, 1860, 86.

Cumberland, on the whin-sill of, by W. Hutton, 1831–32, 76.
——, on the geology of Caldbeck Fells, and the lower sedimentary rocks of, by Prof. Harkness, 1857, 67.
——, West, on some phenomena at the junction of the granite and schistose rocks in, by Prof. Phillips, 1858, 106.
——, West, on the hæmatite ores of, by Prof. Phillips and R. Baker, jun., 1858, 106.
Cuzco, city of, in Peru, J. B. Pentland on the position of the, 1838, 99.

Dana River, Eastern Africa, J. L. M'Leod on the, 1859, 193.
Danube, on the steel suspension-bridge over an arm of the, by J. I. Hawkins, 1831–32, 608.
Darien, Isthmus of, on the exploration of the, by J. M. Inskip, 1855, 148.
——, Isthmus of, on the gold-mines of the, and on the canalization of the, by Dr. Cullen, 1850, 79.
Dartmoor, on a series of specimens from the granite-quarries of, by Rev. Dr. Buckland, 1841, 64.
——, granite-quarries of, and their railways and machinery, W. Johnson on the, 1841, 105.
Dead Sea, an attempt to account for numerous appearances of sudden and violent drainage seen on the sides of the, by Capt. W. Allen, 1852, 95.
——, on a ship-canal to the East Indies, through the, by Capt. W. Allen, 1852, 97.
——, shores of, observations with the aneroid métallique during a tour through Palestine and the, 1856, 41.
——. on the water of, by J. Murray, 1838, 73.
Deccan, on the fruits of the, by Col. Sykes, 1836, 106.
Dee and Mersey, to the east of Liverpool, on a geological section from the island of Little Eye across the peninsula between the estuaries of the, by E. Hull, 1854, 86.
Demerara, on the fall of rain registered at Georgetown, by P. Sandeman, 1859, 52.
Denbighshire, on the bone-cave at Cefn, by J. E. Bowman, 1836, 88.
——, notice of the remains found in a bed of diluvium in a cave at the Cefn rocks, 1837, 96.
——, on the remains found in the cave at, by J. Trimmer, 1838, 86.
——, on the upper Silurian rocks of, by J. E. Bowman, 1841, 59.
——, periodical birds observed near Llanrwst, by J. Blackwall, 1843, 69; 1844, 61; 1845, 63; 1847, 75.
Denmark, statistical remarks relating to the several states of, by R. Bielke, 1847, 96.
Derbyshire, on the beds of toadstone, and lead-veins of, by E. Hall, 1837, 91.
——, model of a part of, exhibited by Mr. Hall, 1834, 666.
Derbyshire, on a mineral map of, by E. Hall, 1837, 91.
——, North, on the currents present during the deposition of the carboniferous and Permian strata of, by H. C. Sorby, 1858, 108.
—— on the position of the rocks of the Penine chain, by J. B. Jukes, 1838, 79.
——, on the toadstones of, by J. Alsop, 1844, 51.
——, on a yew-tree in the churchyard of Darley, by J. E. Bowman, 1836, 101.
Devon and Cornwall, on the chronological and geographical distribution of the Devonian fossils of, by J. Pengelly, 1860, 91.
—— and Cornwall, on the flora of, by Rev. W. S. Hore, 1841, 75.
——, on the post-tertiary formations of, by Mr. Bartlett, 1841, 61.
——, on the fossils of, by J. C. Bellamy, 1841, 64.
——, on the distribution, &c. of the mammals of, by J. C. Bellamy, 1841, 68.
——, on the grauwacke of, by Rev. D. Williams, 1837, 95.
——, South, and Cornwall, on the geological horizon of the rocks of, by Rev. D. Williams, 1839, 68.
——, on the older strata of, by Rev. D. Williams, 1840, 103.
——, South, on the climate of, by E. Vivian, 1860, 56.
——, South, and Torquay, on the climate of, by E. Vivian, 1856, 48.
——, South, on the organic remains of the limestones and slates of, by R. A. C. Godwin-Austen, 1839, 69.
——, North, notice of the discovery of fossils on Great Hangman Hill, 1841, 64.
——, North, and Somerset, proportionate view and tabular order of superposition of the grauwacke system of, by Rev. D. Williams, 1837, 95.
——, ossiferous caverns and fissures of, list of remains of mammals of the 1859, 121.
——, on a classification of the old slate rocks of the north of, by Rev. Prof. Sedgwick and Sir R. I. Murchison, 1836, 95.
Devonport, on the longitude of, by E. J. Dent, 1842, 9.
——, notice of the thermometrical observations at, 1831–32, 579.
Donegal, north of, on the metamorphic rocks of, by Prof. Harkness, 1860, 79.
Domingo, Santo, ethnological researches in, by Sir R. Schomburgk, 1851, 90.
Dorsetshire, on two springs on the north side of Hales Bay, Poole Harbour, by Rev. W. D. Clarke, 1836, 94.
——, on the phenomena of the plastic-clay formation near Poole, by Rev. W. D. Clarke, 1837, 93.
——, on a remarkable deposit of carbonate of lime about fossils in the lower lias of, by G. Gladstone, 1858, 51.
——, on the succession of strata and dis-

tribution of organic remains in the Purbecks of, by Prof. E. Forbes, 1850, 79.
Down and Antrim, on the origin, characteristics, and dialect of the people in the counties of, by Rev. Dr. Hume, 1852, 89.
—— and Antrim, on the geological structure of the counties of, by Dr. J. Bryce, 1852, 42; J. MacAdam on the fossiliferous beds of, 53.
Downshire, on the discovery of Silurian fossils in the slates of, by Dr. J. Bryce, 1859, 260.
Droitwich, on the occurrence of marine plants on the banks of the canal of, by Prof. Buckman, 1847, 61.
Dublin, Glasgow, and London, on the state of crime in, by Capt. Millar, 1840, 173.
——, account of the magnetical observatory at, by Rev. Dr. Lloyd, 1837, 20.
——, magnetical observatory of, on the observations of the direction and intensity of the earth's magnetic force, made at the, by Rev. Dr. Lloyd, 1843, 12.
——, notice of a geological map of the environs of, 1835, 58.
Dudley, on a new species of Siphonotreta from the Wenlock limestone and shale in the vicinity of, by Prof. Morris, 1849, 57.
Dufton, examination of the sulphuretted sulphate of lead from, by Prof. Johnston, 1831–32, 577.
Dukinfield, on the income and expenditure of the working-classes in, by W. Neild, 1841, 90.
Dumfriesshire, on the position of the footsteps in the Bunter sandstone of, by Prof. Harkness, 1850, 83.
——, on the representatives of the mountain limestone as they occur in, by Prof. Harkness, 1850, 84.
——, on crustacean impressions from the trias of, by Prof. Harkness, 1854, 86.
Dundee, on the tides of, by D. Mackie, 1837, 5.
Dunnideer, mountain of, Aberdeenshire, on the vitrified forts on the, by Sir A. L. Hay, 1859, 179.
Dur River of Ptolemy, on its identification with the Kenmare River, by Rev. Prof. Graves, 1857, 132.
Dura Den, on the fossil fishes and yellow sandstone of, by Rev. Dr. Anderson, 1850, 70; 1858, 74; 1859, 97.
Durham, on a quantity of human bones discovered in a field near Bellingham, by J. Hogg, 1848, 95.
——, South-eastern, catalogue of birds observed in, by J. Hogg, 1844, 59.
——, North, and Berwick coal-field, D. Milne on the, 1838, 76.
——, statistics of nine collieries in, by W. L. Wharton, 1838, 169.
Durness, on the fossils from, by J. W. Salter, 1857, 83.
East Bourne, on agricultural schools near, 1844, 87.
East Indies, on a ship-canal to the, through the Dead Sea, by Capt. W. Allen, 1852, 97.
—— and North America, on steam communication with the, by Dr. Lardner, 1836, 130.
Ecuador and the River Napo, on the eastern territory of, by Rev. C. G. Nicolay, 1854, 123.
Eden, Vale of, on a basaltic dyke in the, by J. A. Knipe, 1839, 67.
Edinburgh, on the striated rocks of the Corstorphine Hills near, by Sir R. I. Murchison, 1842, 53.
——, on the glacial phenomena of the neighbourhood of, by R. Chambers, 1854, 78.
——, observatory of, on a new form of equatorial mounting for the, by Prof. C. P. Smyth, 1850, 187.
—— and London, on the difference of longitude between, by Sir T. M. Brisbane, 1838, 20.
—— and Glasgow, on the comparative vital statistics of, by Mr. Watt, 1840, 173.
Egypt, ancient, notice of a map of, of the time of Antoninus Pius, by J. Bonomi, 1848, 66.
——, on the plague in, by Dr. Bowring, 1838, 121.
Elgin, on the newly-discovered reptilian remains from the neighbourhood of, by Prof. Huxley, 1859, 261.
——, on fossil remains found at Urquhart, near, by Rev. J. Morrison, 1859, 262.
——, on the supposed Wealden and other beds near, by C. Moore, 1859, 264.
—— and Lossiemouth, on the yellow sandstones of, by Prof. Harkness, 1859, 109.
England, on the changes of climate in, by H. Fairbairn, 1842, 26.
——, on the direction of the isoclinal lines in, by Rev. Dr. Lloyd, 1836, 31.
——, South of, on the 'Avicula contorta' beds and lower lias in the, by T. Wright, 1860, 108.
——, statistics of crime in, 1846, 102.
——, progress and character of popular education in, by J. Fletcher, 1848, 102–104.
—— and Wales, moral and educational statistics of, by J. Fletcher, 1848, 105.
—— and Wales, on the criminal statistics of, by R. W. Rawson, 1839, 117.
—— and America, on telegraphic communication between, by F. Bakewell, 1854, 147.
—— and America, on a new electric route between, by General Chesney, 1858, 148.
—— and India, on the routes of communication between, by General Chesney, 1857, 123.
——, prices of the cerealia and other edibles of, compared with those of India, by Col. Sykes, 1847, 107.
——, on the cultivation of silk in, 1846, 87.
——, on plate-glass making in, 1846, 105.

England and France, on the criminal statistics of, by M. Guerry, 1851, 100.
Enniskillen and Belfast, a comparison of the rain-fall at, by W. Thompson, 1844, 14.
Esthonia, on certain ethnological questions connected with the coast of, by Dr. R. G. Latham, 1853, 86.
Estremadura, Spanish, on the phosphorite rock in, by Prof. Daubeny, 1844, 28.
Ethiopia, on the ethnological and physical characters of the negro of, by A. d'Abbadie, 1857, 117.
Euphrates, River, on the ascent of the, by Lieut. Lynch, 1838, 99.
——, River, General Chesney's description of the, 1852, 106.
—— valley, on opening a communication with India by the, by General Chesney, 1857, 123.
Europa Island, Mozambique Channel, Eastern Africa, notice of, by J. L. M'Leod, 1859, 193.
Europe, geological section of, notice of Conybeare's, 1831–32, 583.
——, geological map of, on Mr. Greenough's numerous and valuable materials for a, 1831–32, 583.
——, new geological map of, notice of the, 1855, 88.
Exmouth Island, Arctic regions, on the discovery of Ichthyosaurus and other fossils in, by Capt. Sir E. Belcher, 1855, 79.

Fair Head, Ireland, proposal to erect a harbour at, by W. H. Smith, 1852, 129.
Falmouth and Truro, on an original broad sheet of granite between, by Rev. D. Williams, 1849, 68.
Farnell Road, Forfarshire, on the ichthyolites of, by Sir P. de M. G. Egerton, 1860, 77.
——, Forfarshire, on a fossiliferous deposit near, by J. Powrie, 1860, 89.
Färoe Islands, on the phænogamous plants of the, by W. C. Trevelyan, 1834, 598.
——, on an undescribed fossil wood from the, by W. C. Trevelyan, 1834, 666.
——, on the discovery of guano in the, by W. C. Trevelyan, 1845, 64.
——, on the depression of the coast of the, by Rev. Mr. Selvester, 1840, 123.
——, on the birds of the, by J. Wolley, 1850, 127.
——, some remarks on, by Col. Shaffner, 1860, 178.
Fifeshire, exhibition of a drawing of a large fish (Holoptychius nobilissimus) from the old red sandstone of Clashbennie, 1836, 94.
——, on the skeleton of a seal from the pleistocene clays of Stratheden, by D. Page, 1858, 103.
Filey, analysis of the spring at, 1844, 111.
Finland, on the character, extent, and ethnological value of the Indo-European element in the language of, by R. Cull, 1857, 127.
Finmark, on meteorological observations made at Alten, 1844, 27, 28; 1846, 12; 1847, 34; 1848, 32; at Kaafjord, near Alten, 1849, 18.
Firth of Forth, on the abnormal tides of the, by J. S. Russell, 1842, 115.
Fish River of the North Polar Sea, Dr. King on the, 1844, 58.
Flamborough Head, on the evidence of a reef of lower lias rock, extending from Robin Hood's Bay to, by Capt. Woodall, 1856, 80.
Flanders, on the composition of a recently formed rock on the coast of, by Dr. T. L. Phipson, 1859, 77.
Forest of Dean, description of an ancient miner's axe discovered in the, 1856, 71.
Forfarshire, on the fall of rain in, by A. Brown, 1859, 47.
——, on the ichthyolites of Farnell in, by Sir P. de M. G. Egerton, 1860, 77.
——, on a fossiliferous deposit near Farnell in, by J. Powrie, 1860, 89.
——, on new fossils from the lower old red sandstone of, by H. Mitchell, 1859, 116.
Formosa, island of, W. Lockhart on the, 1860, 169.
Forth, on the ossiferous beds in the basin of the, by Dr. Hibbert, 1834, 642.
France, on the discovery of palæozoic fossils in the crystalline chain of the Forez in, by Sir R. I. Murchison, 1850, 96.
—— and Germany, on lines of dislocation between the lower and upper carboniferous deposits of, by Sir R. I. Murchison. 1850, 96.
——, on the progress of mining industry in, by G. R. Porter, 1838, 174; 1844, 86.
——, on the six climates of, by Dr. C. Martins, 1850, 46.
——, ethnological outlines of, by R. de Vericour, 1847, 127.
——, on the commercial statistics of, in 1840, by Rev. H. L. Jones, 1842, 98.
——, on the fluctuations of the annual supply and average price of corn in, by J. T. Danson, 1849, 87.
—— and England, on the criminal statistics of, by M. Guerry, 1851, 100.
Frankfort on the Maine, on the statistics of, by Col. Sykes, 1844, 88.
Frazer River, British North America, some remarks on the, by Dr. N. Shaw, 1858, 153.
Frome, on triassic beds near, by C. Moore, 1858, 93.
——, on the fossils of the triassic drift in the neighbourhood of, by C. Moore, 1860, 87.
Frozen Sea, tides of the, 1839, 11.

Gainsborough, on microscopic vegetable skeletons found in peat near, by E. W. Binney, 1839, 71.
Galloway, Mull of, results of deep dredging off the, 1842, 72.
——, on the granite formations of New

Abbey in, by Rev. J. M. Fisher, 1840, 95.
Galty Mountains, south of Ireland, on the geology of the, by A. B. Wynne, 1857, 93.
Galway, West, and eastern parts of Mayo, J. Bermingham on the drift of, 1857, 64.
Garhwál, in the Himalaya Mountains, Capt. R. Strachey on the geography of, 1851, 92; J. Strachey on the inhabitants of, 94.
Garrow Hills, Hindostan, on the ethnographical position of certain tribes of the, by Dr. R. G. Latham, 1844, 80.
Gebel Haurân, its adjacent districts, and the eastern desert of Syria, with remarks on their geography and geology, by J. Hogg, 1859, 180.
Geneva, Lake of, the zoology, &c. of Lough Neagh compared with that of the, 1846, 84.
—— and London, annual mean temperature for eighteen years at, by L. Howard, 1845, 25, 26.
Germany, notice of geological maps of different parts of, 1840, 124.
——, the "Permian system" as applied to, by Sir R. I. Murchison, 1843, 52.
——, on the palæozoic rocks of, by Sir R. I. Murchison, 1854, 87.
——, on the University statistics of, by J. Heywood, 1845, 86.
——, on the mortality of the provident classes in, by F. G. P. Neison, 1850, 151.
Giant's Causeway, on some caverns containing bones near the, by J. Bryce, 1834, 658.
—— and the Isle of Mull, on the lignites of the, by Prof. Harkness, 1856, 66.
Girdleness and Dunnottar Castle, Kincardineshire, on the section of the coast between the, by Rev. Dr. Longmuir, 1859, 261.
Glasgow, on the minerals in the neighbourhood of, by Prof. T. Thomson, 1840, 64.
——, on chemical manufactures carried on in and near, by Prof. T. Thomson, 1840, 58.
——, on the superficial beds in the neighbourhood of, by J. Smith, 1840, 94.
——, on the observatory erecting near, by Prof. Nichol, 1840, 1; on the observatory at, 1842, 12.
——, ancient canoes found at, J. Buchanan on, 1855, 80.
——, on the flowering of Victoria regia in the Royal Botanic Garden at, by P. Clark, 1855, 102.
——, on the tides in the harbour of, and on the velocity of the tidal wave in the River Clyde, by W. Bald, 1840, 49.
——, on the tides of, by D. Mackie, 1837, 5.
——, on the statistics of, by Dr. Cleland, 1834, 685; 1836, 140.
——, on the population, trade, and commerce of, by Dr. Cleland, 1840, 174.
——, on the progress of, in population, wealth, manufactures, &c., by Dr. Strang, 1850, 162.
——, on the progress, extent, and value of the porcelain, earthenware, and glass manufacture of, by Dr. Strang, 1856, 153.
Glasgow, on the sewing-machine in, and its effects on production, prices, and wages, by Dr. Strang, 1858, 198.
——, on the money-rate of wages of labour in, by Dr. Strang, 1856, 155.
——, on the state of crime in the suburban burgh of Anderston, by Mr. Findlater, 1840, 176.
——, on the state of crime in the Gorbals, by Mr. Richardson, 1840, 177.
——, on the state of crime in, by Capt. Millar, 1840, 169.
——, Dublin, and London, on the state of crime in, by Capt. Millar, 1840, 173.
——, on the state of crime within the suburban districts of, by Mr. Rutherglen, 1840, 175.
——, on juvenile delinquency, its principal causes and proposed cure, as adopted in the Reformatory Schools of, by Rev. A. K. M'Callum, 1855, 173.
——, on the normal school of, by Mr. Leadbetter, 1840, 170.
——, on church-building in, by Dr. Strang, 1859, 223.
——, on the asylum for the blind, by Mr. Alston, 1840, 171.
——, on Mr. Fleming's plans for ventilation adopted in, by R. Chambers, 1842, 109.
——, on the vital statistics of, by Dr. Cowan, 1840, 173.
—— and Edinburgh, on the vital statistics of, by Mr. Watt, 1840, 173.
——, on the statistics of education in, by A. Liddell, 1846, 101.
——, statistics of a grammar-school class of 115 boys, by A. Tennent, 1855, 192.
Glenmessan (Argyleshire), on traces of ancient glaciers in, by C. Maclaren, 1850, 90.
Gloucestershire and part of Wilts, on the cornbrash of, by Prof. Buckman, 1853, 50.
——, on the discovery of insects in the lower beds of lias of, by Rev. P. B. Brodie, 1824, 58.
Gold Coast of Africa, on the Ghá nation of the, by Rev. A. W. Hanson, 1849, 85.
Gothland, on certain ethnological questions connected with the coast of, by Dr. R. G. Latham, 1853, 86.
Grampian Mountains, on sections along the southern flanks of the, by Prof. Harkness, 1859, 109.
Grantham, on the great oolite, inferior oolite, and lias near, by Rev. P. B. Brodie, 1850, 74.
Grassington lead-mines, S. Eddy on the, 1844, 52.
Gravesend, on the action of acidulated waters on the chalk near, by Rev. Dr. Buckland, 1839, 76.
Great Britain, on naval architecture in, 1831–32, 607, 608.

Great Britain, on the results of the census of, in 1851, by E. Cheshire, 1853, 98.
——, on local and hereditary difference of complexion in, with notice of the Cimbri, by Rev. R. Williams, 1845, 81.
—— and Ireland, on the distribution of the population of, by A. Petermann, 1848, 113.
Great Malvern, meteorological observations made at, by Mr. Addison, 1839, 14.
Greenland, on the falcons of, by J. Hancock, 1838, 106.
——, some remarks on, by Col. Shaffner, 1860, 178.
—— and Davis Straits, on the whale and seal fisheries of, carried on by vessels from Peterhead, 1859, 216.
Greenock, on the water-filters at, by Mr. Thom, 1840, 207.
Greenwich observatory, on the state of the reductions of the planetary and lunar observations made at, by G. B. Airy, 1844, 2.
—— observatory, on the pivots and construction of the large transit-circle for the, by G. B. Airy, 1850, 169.
—— and Utrecht, on the similarity of the lunar curves of minimum temperature at, by J. P. Harrison, 1860, 44.
—— and Altona, on the difference of longitude between, by Prof. Struve, 1847, 46.
—— and Poulkova observatories, on the difference of longitude between the, by Prof. Struve, 1847, 46.
—— and New York, experiment to determine the difference of longitude between, by E. J. Dent, 1839, 27.
Guadaloupe, on the earthquake (Feb. 1843) at the island of, by Hon. Capt. Carnegie, 1843, 59.
Guernsey, short notice of the flora of, by C. C. Babington, 1837, 103.
——, on the geology of, by R. A. C. Godwin-Austen, 1849, 49.
Guiana, British, on the climate of, by P. Sandeman, 1859, 52.
——, on the geography of, by Sir R. Schomburgk, 1845, 50.
——, comparative vocabulary of the languages and dialects of, by Sir R. Schomburgk, 1848, 96.
——, on the natives of, by Sir R. Schomburgk, 1844, 83.
——, on the disease called 'Arapatta' of the Caribes of, by Dr. J. Hancock, 1837, 128.
——, on the modes of fishing employed by Indians in the west of, by Sir R. Schomburgk, 1840, 135.
——, notice of the Manati or Cow-fish of, 1836, 98.
——, on the Murichi or Ita Palm of, by Sir R. Schomburgk, 1845, 71.
——, on the wax-tree of, by Mr. Hamilton, 1835, 78.
——, notice of a new species of the Norantia (Bush rope) of, 1836, 104.
Guiana, British, on some trees and plants of, by Sir R. Schomburgk, 1844, 71, 72.
Gulf-stream, on its influence on the climate of Ireland, by Prof. Hennessy, 1857, 132.

Hales Bay, Poole Harbour, on the existence of two springs on the north side of, by Rev. W. D. Clarke, 1836, 94.
Halifax, analysis of the chalybeate spring at Horley Green near, by W. West, 1844, 109.
Hampshire, on the freshwater eocene beds of the Hordle cliffs, by the Marchioness of Hastings, 1847, 63, 65.
——, tertiary beds of, on new species of Testacea from the, by E. Charlesworth, 1849, 52.
Harrogate, on the springs of, by W. West, 1844, 109.
Hastings, Torquay, Jersey, and London, temperature table showing the daily average height of the thermometer at, 1848, 16.
Hawaiian Islands, on the natives of the, by Rev. W. Richards, 1844, 82.
Hay Head, Staffordshire, on the age of the Silurian limestone of, by Prof. Buckman, 1846, 61.
Herefordshire, on a new species of Eurypterus from the old red sandstone of, by Rev. W. S. Symonds, 1857, 93.
——, on some fishes and tracks from the passage rocks and from the old red sandstone of, by Rev. W. S. Symonds, 1859, 124.
Herm, island of, notice of the flora of, 1837, 103.
Highland Border, on the structure and mutual relationships of the older rocks of the, by H. C. Sorby, 1855, 96.
Highlands of Scotland, North-west, on the relations of the gneiss, red sandstone, and quartzite in the, by Prof. Nicol, 1859, 119.
Himalaya and Thibet, on the geology of a part of, by Capt. Strachey, 1851, 69.
—— and Thibet, on the botanical geography of, by Major Madden and Capt. Strachey, 1851, 72.
Himalayas, on the inhabitants of the Tarai at the foot of the, by J. B. Davis, 1859, 177.
——, on the inhabitants of the, by J. Strachey, 1851, 94.
——, on the vegetation of the, by Prof. Royle, 1846, 74.
——, on the geology of a portion of the, by Major Vicary, 1852, 62.
——, on the geography and geology of Kumáon and Garhwál in the, by Capt. Strachey, 1851, 92.
—— of Kumáon, notices of journeys in the, by A. and R. Schlagintweit, 1855, 152.
Himmelsfurst Mine, Freyberg, researches on the electrical currents on metalliferous veins, made in, by Prof. Reich, 1839, 34.
Hindostan, on the cultivation of silk in, by W. Felkin, 1839, 88.
Hiogo, Port of, in the Bay of Ohosaka, Japan, L. Oliphant on the, 1859, 194.

Holderness, on the waste of the coast at, by G. G. Kemp, 1853, 53.
——, on changes observed in wood from the submerged forest of Wawne, by T. J. Pearsall, 1853, 45.
Hordle cliffs, Hants, on the freshwater eocene beds of the, by the Marchioness of Hastings, 1847, 63, 65.
Hordwell, Hants, on the discovery of an alligator in the freshwater cliff at, by S. Wood, 1844, 50.
——, Hants, on new fossil mammalia from the eocene freshwater formation at, by Prof. Owen, 1851, 67; 1856, 72.
Huddersfield, on the springs in the neighbourhood of, by W. West, 1844, 108.
Hudson Bay, on the palæozoic basin of, by Prof. H. D. Rogers, 1856, 177, 180.
Hudson's Bay and Straits, on the formation of icebergs and ice-action in, by Dr. J. Rae, 1860, 174.
Huggate, meteorological observations made at, by Rev. T. Rankin, 1845, 18; 1848, 36; 1850, 42; 1854, 34; 1856, 47; 1858, 38; 1859, 52; 1860, 50.
——, thermometrical observations in a deep well at, by Rev. T. Rankin, 1844, 22; 1845, 18.
——, on a phosphoric phenomenon in a pond at, by Rev. T. Rankin, 1849, 29.
Hull, account of the circulating libraries in the borough of, 1839, 120.
——, on the Diatomaceæ of the neighbourhood of, by J. D. Sollitt and R. Harrison, 1853, 63.
——, on the meteorology of, by W. Lawton, 1853, 27.
——, on the mortality of, in the autumn of 1849, by Dr. H. Cooper, 1853, 102.
——, on the prevalence of diseases in, by Dr. H. Cooper, 1853, 103.
——, on the causes, extent, and preventives of crime, in reference to, by Rev. J. Selkirk, 1853, 112.
——, state of education in the borough of, by the Manchester Statistical Society, 1840, 177.
——, on the condition of the working-classes in, by the Manchester Statistical Society, 1841, 85.
Humber, analyses of the mud of the, by J. D. Sollitt, 1853, 49.
——, on the dialects north and south of the, by C. Beckett, 1853, 73.
Huntingdonshire, on the geology of St. Ives, by J. K. Watts, 1852, 63.

Iceland, on the cause of the phenomena exhibited by the geysers of, by Dr. S. Macadam, 1854, 73.
——, on the condition of the Haukedalr geysers of, by R. Allan, 1855, 75.
——, on the eruption in May 1860 of the Kötlugjá volcano in, by W. L. Lindsay, 1860, 86.
Iceland, on the falcons of, by J. Hancock, 1838, 106.
——, its inhabitants and language, J. Hogg on, 1853, 82.
——, some remarks on, by Col. Shaffner, 1860, 178.
Iceland spar, on the ordinary refraction of, by Sir D. Brewster, 1843, 7.
Ilford, on the elephant-remains at, by A. Brady, 1859, 100.
Ilkley, analysis of the water at, 1844, 107.
India, on the aboriginal tribes of, by Genera Briggs, 1847, 118.
——, Central, on the aboriginal tribes of, by R. Schlagintweit, 1860, 175.
——, Central, on the migratory tribes of, by E. Balfour, 1845, 78.
——, on the people of Oude and their leading characteristics, by H. M. Greenhow 1858, 151.
——, on the Shyens and Karens of, by Mr Kincaid, 1844, 84.
——, on the ethnological position of the Bráhui, and on the languages of the Paropamisus, by Dr. Latham, 1851, 89.
——, on the inhabitants of Lower Bengal by R. Young, 1851, 95.
——, on the inhabitants of Kumáon and Garhwál in the Himalaya, by J. Strachey, 1851, 94.
——, on the inhabitants of the Tarai, at the foot of the Himalayas, by J. B. Davis, 1859, 177.
—— and Upper Asia, on some human races in, by H. Schlagintweit, 1857, 151.
——, on some of the animals of, by H. and R. Schlagintweit, 1857, 106.
——, on the partridges of the great watershed of, by H. E. Strickland, 1853, 71.
——, on the fossil elephantine animals of, by Dr. Falconer, 1845, 62.
——, on the geographical distribution of plants in, by Dr. Royle, 1845, 74.
——, on the geographical distribution of the flora of, and on the vegetation of its lakes, by Dr. Royle, 1846, 74.
——, on the botanical geography of part of the Himalaya and Thibet, by Major Madden and Capt. Strachey, 1851, 72; of Western Thibet, by Dr. T. Thomson, 73.
——, on plants adapted for field-enclosures in, by Dr. H. Cleghorn, 1850, 113.
——, on the bright-coloured flowers in the forest trees of, by Dr. Buist, 1859, 130.
——, on the grass-cloth of, by Dr. H. Cleghorn, 1850, 112.
——, on the Lotus or sacred bean of, by Dr. Buist, 1857, 96.
——, Western, on some peculiarities of th silk-trees or Bombaceæ of, by Dr. Buist 1859, 132.
——, on the cultivation of the cotton plant in, by Major-General Briggs, 1839, 90.
——, on the growth of cotton in, by Dr. A. Burn, 1840, 146.

India, on the culture of cotton in, by Dr. Royle, 1842, 61.
——, on the fibres of, by J. H. Sadler, 1858, 195.
——, prices of the cerealia and other edibles of, compared with those of England, by Col. Sykes, 1847, 107.
——, contributions to the statistics of sugar produced in, by Col. Sykes, 1849, 108.
——, on the formation of committees for investigating the natural and artificial products of, by Col. Sykes, 1836, 149; articles introduced from, 150.
——, ascent of the Himalayan mountain Sumeru Parbut, by Capt. Robinson and Lieut. Sandilands, 1855, 150.
——, on the physical features of Kumáon and Garhwál in the Himalayas, by Capt. Strachey, 1851, 92.
——, general sketch of the districts visited by the Geological Survey of, by T. Oldham, 1857, 85.
——, on the geology of, by G. B. Greenough, 1854, 83.
——, on the geology of part of the Himalaya and Thibet, by Capt. Strachey, 1851, 69.
——, on indications of upheavals and depressions of the land in, by Dr. Buist, 1851, 55.
——, on the velocity of earthquake-shocks in the laterite of, by J. A. Broun, 1860, 74.
——, on the currents of the seas of, by Dr. Buist, 1853, 12.
——, on erosion of rivers in, by H. and R. Schlagintweit, 1857, 90.
——, on the rocks of the Upper Punjaub, by Dr. A. Fleming, 1852, 43.
——, South, on magnetic rocks in, by J. A. Broun, 1860, 24.
——, on the coal of, by Prof. Ansted, 1846, 63.
——, on a remarkable specimen of amber from Ava, by Sir D. Brewster, 1834, 574.
——, on tertiary fossils of, by W. H. Baily, 1859, 97.
——, barometrical levelings in the Madras Presidency, by General Cullen, with observations by Col. Sykes, 1847, 42.
——, on the geodetical operations of, by Col. Everest, 1844, 3.
——, on the measurement of two arcs of the meridian in, by Col. Everest, 1845, 25.
——, west coast of, on a magnetic survey of the, by J. A. Broun, 1860, 27.
—— and High Asia, general abstract of the results of Messrs. de Schlagintweit's magnetic survey of, 1860, 32.
——, on the trigonometrical survey of, by Major Jervis, 1838, 98.
——, establishment of a magnetic, meteorological, and astronomical observatory on the mountain of Angusta Mullay, at 6200 feet, in Travancore, 1855, 25.
——, on mean temperatures in, by Col. Sykes, 1834, 567.
India, Western, on the climate of, by Dr. Buist, 1851, 29.
——, rain-table, from 1817 to 1847, at Bombay, by Col. Sykes, 1848, 47.
——, on the fall of rain on the coast of Travancore and table-land of Uttree, from observations of General Cullen, by Col. Sykes, 1846, 22; 1848, 39.
——, on hail-storms in, by Col. Sykes, 1850, 43.
——, on remarkable hail-storms in, by Dr. Buist, 1851, 31; 1855, 31.
——, on a remarkable storm at Bombay, by Col. Sykes, 1848, 41.
——, on the meteorology of Coorg, in the western Ghâts of, by Col. Sykes, 1842, 22.
——, meteorological observations made at Bombay, 1846, 26.
——, C. J. Pyle's meteorological observations at Futtegurh, Bengal, with notes by Dr. Buist and Col. Sykes, 1851, 39.
——, on meteorological observations made at Trevandrum, by Mr. Caldecott, 1840, 28.
——, meteorological phenomena observed in, by Dr. Buist, 1849, 15.
——, Western, on meteorological phenomena in the Ghâts of, by Col. Sykes, 1839, 15.
—— and England, on the routes of communication between, by General Chesney, 1857, 123.
——, on the Euphrates line of communication with, by General Chesney, 1852, 104.
——, on the most rapid communication *vid* British North America, by Capt. Synge, 1852, 114.
——, a proposed new route to (the Syro-Arabian railway), J. Locke on, 1856, 114.
——, on the extension of the submarine telegraph to, by J. W. Brett, 1854, 7.
——, on telegraphic communication with, by General Chesney, 1857, 126.
——, the Himalayas, Thibet, and Turkistan, on the routes pursued by Messrs. Schlagintweit in, 1857, 149.
——, on the trade and commerce of, by J. T. Mackenzie, 1859, 217.
——, on the British trade with, by R. Valpy, 1859, 227.
——, on the past and prospective financial condition of, by Col. Sykes, 1859, 223.
——, revenue statistics of the Agra Government, or north-west provinces of Bengal, by Col. Sykes, 1847, 109.
——, on the census and condition of the island of Bombay, by Col. Sykes, 1852, 120.
——, on wages in, by Col. Sykes, 1835, 118.
——, statistics of civil justice in, by Col. Sykes, 1846, 94.
——, statistics of civil justice in Bengal, by Col. Sykes, 1848, 116.
——, statistics of criminal and civil justice under the Bombay Government, by Col. Sykes, 1850, 159.

India, statistics of the criminal courts of, by Col. Sykes, 1846, 95.
——, statistics of the Government charitable dispensaries of, by Col. Sykes, 1846, 96.
——, on the means of maintaining the health of troops in, by E. Balfour, 1848, 101.
——, on the diseases and causes of disability for military service in the Indian army, by Dr. C. Finch, 1849, 89.
——, on the prevalence and mortality of cholera in the Indian armies, by Dr. C. Finch, 1850, 161.
Indian Archipelago, on the alphabet of the, by J. Crawfurd, 1849, 83.
—— Archipelago and Pacific Islands, on the negro races of the, by J. Crawfurd, 1851, 86.
Indian and Pacific Oceans, on the three races of men inhabiting the islands of the, by J. B. Jukes, 1846, 114.
Inhambane, Eastern Africa, J. L. M'Leod on, 1859, 189.
Iniack Island, Eastern Africa, J. L. M'Leod on, 1859, 189.
Ipswich, on calcareous zoophytes found at, by C. W. Peach, 1851, 81.
——, on the occurrence of a stratum of stones covered with barnacles in the red crag at Wherstead near, by Sir C. Lyell, 1851, 65.
——, on the structure of the crag near, by Prof. Phillips, 1851, 67.
Iquique, port of, on the, 1852, 102.
Ireland, on additions to the fauna of, by W. Thompson, 1843, 73; 1846, 83; 1847, 80; 1848, 125.
——, notice of some crania of seals found on the coast of, 1836, 98.
——, number of the Vertebrata found in co. Cork, 1843, 68.
——, notice of Cuculus glandarius, captured in co. Galway, 1843, 71.
——, on the nidification of the woodcock in, by W. Thompson, 1843, 71.
——, notice of insects found in co. Cork, 1843, 76.
——, list of additions to the Lepidoptera of, by E. Birchall, 1857, 101.
——, notice of the Mollusca of co. Cork, 1843, 71.
——, on the Irish species of the genus Limax, by Rev. B. J. Clarke, 1843, 73.
——, living animals dredged up on the coast of Cork, 1843, 74.
——, new species of mollusk found at Dalkey Island, 1843, 74.
——, on a new genus of terrestrial gasteropod found in co. Kerry, by Dr. Allman, 1843, 77.
——, on the genera and species of zoophytes of the fresh waters of, by Dr. Allman, 1843, 77.
——, notice of an Annelid found in the bogs of the south of, 1843, 76.
——, notice of a species of hydrostatic Acalepha taken in Belfast Bay, 1843, 76.
——, zoology, &c. of Lough Neagh compared with that of the Lake of Geneva, 1846, 84.
Ireland, on the occurrence of Calothrix nivea with infusoria in the sulphureous waters at Cove, by Dr. Lankester, 1843, 77.
——, notice of additions to the flora of, 1846, 90.
——, on the flora of the south and west of, by Prof. Balfour, 1852, 64.
——, on the altitudinal ranges of plants in the north of, by Prof. Dickie, 1852, 66.
——, notice of Irish Saxifrages, 1843, 78.
——, on the Saxifrages of, by Dr. T. Andrews, 1845, 74.
——, notice of the discovery of Neottia (Spiranthes) gemmipara in co. Cork, 1843, 78.
——, notice of a new species of Linaria gathered in, 1843, 78.
——, notice of Trichomanes speciosum found in, 1843, 78.
——, on the plants found near Cork, by Dr. Power, 1843, 79.
——, phanerogamous and cryptogamous plants of co. Cork, 1843, 79.
——, notice of the abundance of the lichens Lecanora tartarea and L. parella about Cork, 1843, 79.
——, on an alga discovered in certain subalpine streams in, by Prof. Allman, 1846, 89.
——, on the timber of the bogs of Westmeath, by Archdeacon Vignoles, 1835, 76.
——, on the plants which form the principal part of the turf-bogs of, by D. Moore, 1857, 97.
——, on the geological map of, by Sir R. Griffith, 1835, 56.
——, notice of the one-inch geological map of, 1857, 75.
——, on the leading features of the geology of, by Sir R. Griffith, 1837, 88; 1852, 47.
——, on the geological structure of the southern counties of, by Sir R. Griffith, 1838, 81.
——, on the yellow sandstone, and other points of the geology of, by Sir R. Griffith, 1840, 110.
——, on the distribution of erratic blocks in, by Sir R. Griffith, 1843, 40.
——, on the lower portion of the carboniferous limestone series of, by Sir R. Griffith, 1843, 42.
——, on certain Silurian districts of, by Sir R. Griffith, 1844, 46.
——, on the old red sandstone or Devonian and Silurian districts of, by Sir R. Griffith, 1843, 46.
——, on the lower members of the carboniferous series of, by Sir R. Griffith, 1852, 46.
——, on the relations of the rocks at or below the base of the carboniferous series of, by Sir R. Griffith, 1857, 66.
——, on the geology of the Galty Mountains, by A. B. Wynne, 1857, 93.

Ireland, on the Valentia trap-district, by G. H. Kinahan, 1857, 75.
——, on the Silurian rocks in co. Tyrone, by Gen. Portlock, 1838, 84.
——, on the geology of the Dingle Promontory, by Prof. Harkness, 1855, 83.
——, on the geological structure of the Dingle Promontory, co. Kerry, by J. B. Jukes, 1857, 70.
——, on the jointing and dolomitization of the lower carboniferous limestone in the neighbourhood of Cork, by Prof. Harkness, 1857, 68.
——, on Devonian rocks in the south of, by J. B. Jukes, 1852, 51.
——, on the cleavage of the Devonians of the south of, by Profs. Harkness and Blyth, 1855, 82.
——, on some geological phenomena in the vicinity of Cork, by F. Jennings, 1843, 51.
——, on some beds of limestone in the valley of Cork, by Dr. C. Y. Haines, 1843, 51.
——, on the traces of glacier-friction on the north-west side of Bantry Bay, by G. B. Airy, 1843, 62.
——, on the geological structure of the counties of Down and Antrim, by J. Bryce, jun., 1852, 42.
——, on the fossiliferous beds of the counties of Antrim and Down, by J. MacAdam, 1852, 53.
——, north of, on the metamorphic rocks of the, by Prof. Harkness, 1860, 79.
——, on the geology of the neighbourhood of Tralee, by F. J. Foote, 1857, 65.
——, on the tertiary clay and lignite of Ballymacadam, near Caher, in the co. of Tipperary, by A. B. Wynne, 1857, 94.
——, on the phosphatic nodules of the greensand of the north of, by Prof. J. F. Hodges, 1852, 36.
——, on the drift of West Galway and the eastern parts of Mayo, by J. Bermingham, 1857, 64.
——, on the 'eskers' of the central part of, by R. Young, 1852, 63.
——, on alterations of level on the sea-coast of part of the co. of Waterford, by Dr. Clarke, 1857, 65.
——, on the fossils discovered in the carboniferous or mountain limestone of, by Sir R. Griffith, 1842, 51.
——, on a bed of sand containing recent marine shells on the summit of a granite hill on the coast of Mayo, by Sir R. Griffith, 1843, 50.
——, on carboniferous limestone fossils from the co. of Limerick, by W. H. Baily, 1857, 62.
——, on the Permian fossils of Cultra, by Prof. W. King, 1852, 53.
——, on the discovery of Silurian fossils in the slates of Downshire, by Dr. J. Bryce, 1859, 260.
——, on the shells found in the alluvial deposits of Belfast, by J. Grainger, 1852, 43, 74.
Ireland, on the marine shells in the gravels of, by T. Oldham, 1844, 57.
——, on the fossils of the yellow sandstone of the south of, by Prof. E. Forbes, 1852, 43.
——, on fossil stems allied to Stigmaria, from the upper beds of the old red sandstone of Hook Point, co. Wexford, by Rev. Prof. Haughton, 1857, 69.
——, on two new species of Crustacea (Bellinurus, König), from the coal-measures in Queen's County, by W. H. Baily, 1858, 76.
——, on the fossil ferns, &c., from the upper Devonian or lower carboniferous strata at Kiltorkan Hill, co. Kilkenny, by W. H. Baily, 1858, 75.
——, on Sphenopteris Hookeri, a new fossil fern from the upper old red sandstone formation at Kiltorkan Hill, co. of Kilkenny, by W. H. Baily, 1859, 98.
——, account of magnetical observations in, by Rev. Dr. Lloyd, 1834, 556.
——, on the meteorology of, by Rev. Dr. Lloyd, 1852, 26.
——, on the influence of the Gulf-stream on the climate of, by Prof. Hennessy, 1857, 132.
——, on the quantity of rain which falls in the south-west of, by Revs. T. Knox and H. Knox, 1843, 22.
——, a comparison of the rain-fall at Enniskillen with that at Belfast, by W. Thompson, 1844, 14.
——, account of the results of the tide observations on the coast of, by G. B. Airy, 1844, 4.
——, ancient laws of, called the Brehon Laws, on the transcription and translation of the, by Rev. Prof. Graves, 1857, 131.
——, on the origin, characteristics, and dialect of the people in the counties of Down and Antrim, by Rev. Dr. Hume, 1852, 89.
——, on the physical and intellectual characteristics of the ancient Irish, by Dr. J. O'Donovan, 1857, 129.
——, on the identification of the river Dur, mentioned by Ptolemy, with the Kenmare River, by Rev. Prof. Graves, 1857, 132.
——, on the round towers of, by G. M. Hills, 1857, 133.
——, on the remains of early stone-built fortresses and habitations in the co. of Kerry, by G. V. Du Noyer, 1857, 148.
——, on improvements in the harbour of Belfast, by R. Garrett, 1852, 126.
——, on the natural peculiarities and advantages of the mineral field and the proposed harbour of Fair Head, by W. H. Smith, 1852, 129.
——, description of the Boyne viaduct, by J. Barton, 1857, 178.
——, on the population of, at different in-

tervals from 1603 to 1856, with causes for periodical increase or decrease, by V. Scully, 1856, 142.
Ireland, report of the census for 1841, by Capt. Larcom, 1841, 91.
——, on the registration of births, deaths, and marriages in, by A. Moore, 1857, 164.
——, on results deducible from the report on the statistics of disease in, by Dr. J. Coldstream, 1855, 164.
——, on the sanitary state of Belfast, by Dr. A. G. Malcolm, 1852, 119.
——, statistics of the deaf and dumb in, by W. A. Wilde, 1852, 121.
——, statistics of crime in, by J. M. Wilson, 1857, 171.
——, on the public relief of pauperism in, by Dr. W. N. Hancock, 1851, 104.
——, on the pauper lunatics of, by Dr. W. C. Taylor, 1843, 90.
——, statistics of the parish of Kilmurry, co. Cork, 1843, 93.
——, on excessive emigration and its reparative agencies in, by J. Locke, 1852, 118; 1853, 107.
——, on the laws of the currency of, by J. W. Gilbart, 1852, 115.
——, on the agricultural statistics of, by G. R. Porter, 1849, 104.
——, on the manner in which agricultural statistics are collected in, by Mr. Donnelly, 1858, 176.
——, is there really a want of capital in?, by Dr. W. N. Hancock, 1851, 106.
——, on pawnbroking in, by H. J. Porter, 1840, 181.
——, on the loan funds in, by H. J. Porter, 1841, 93; 1842, 98.
——, on the monts de piété in, by H. J. Porter, 1842, 98.
——, on a cash land trade for, by R. Dowden, 1857, 160.
——, on the land revolution in, by J. Locke, 1857, 163.
——, statistics respecting sale of encumbered estates in, by Dr. W. N. Hancock, 1850, 148.
——, on the causes of distress at Skull and Skibbereen during the famine in, by Dr. W. N. Hancock, 1850, 149.
——, on the variations in the supply of silver coin in, during the operations for the relief of distress, by Dr. W. N. Hancock, 1847, 97.
——, scheme for improving the condition of labourers, tried at Ralahine, co. Clare, by Mr. Vandaleur, 1847, 98.
——, on a form of table for collecting returns of prices in, by Dr. W. N. Hancock, 1849, 92.
——, on the use to be made of the Ordnance Survey in the registration of judgments and deeds in, by Dr. W. N. Hancock, 1849, 93.
——, on the car establishment of Mr. Bianconi in, 1843, 92; 1857, 155.
Ireland, abstract of the report of the Railway Commissioners in, by R. W. Rawson, 1838, 171.
——, on the silk manufacture of, by Dr. W. C. Taylor, 1843, 89.
——, on the progress of the sewed muslin manufacture of, by Mr. Holden, 1852, 118.
——, on the embroidered muslin manufacture of, by Dr. Strang, 1857, 167.
——, chemical suggestions on the agriculture of the south of, 1843, 38.
——, on the bog-butter of, by J. S. Brazier, 1852, 35.
——, on the resources of the sea-fisheries of, by R. Valpy, 1847, 110.
——, on the sea fisheries of, by W. Andrews, 1857, 101.
——, on the Fata Morgana of, by Mr. M'Farland, 1852, 29.
Irish Sea, on recent changes in the area of the, by Rev. J. G. Cumming, 1854, 80.
Isle of Man, on a pleistocene tract in the, and the relations of its fauna to that of the neighbouring sea, by Prof. E. Forbes, 1840, 104.
——, on Posidonian schist amidst trappean beds, and on traces of drift-ice in the south of the, by the Rev. J. G. Cumming, 1845, 60.
Isle of Wight, exhibition of the woody fibres of the Lavatera arborea of the, 1846, 90.
——, notes on the land mollusca, zoophytes, and algæ of the, by W. Thompson, 1846, 83.
——, on certain deviations of the plumb-line from its mean direction, in the neighbourhood of Shanklin Down, by W. Hopkins, 1846, 59.
——, notice of models and sections of various parts of the, and of Dr. Mantell's geological map of, 1846, 58.
——, on the tertiary and cretaceous formations of the, by Prof. E. Forbes, 1844, 43.
——, arrangement and nomenclature of some of the subcretaceous strata of the, by Dr. Fitton, 1846, 58.
——, on the position of the chloritic marl or phosphate of lime bed in the, by Capt. Ibbetson, 1848, 69.
——, on a newly discovered species of Unio from the Wealden strata of the, by Dr. Mantell, 1844, 42.
——, on the fossils of the cliffs near Atherfield, by Dr. Fitton, 1846, 58.
——, on the occurrence of Cypris in a part of the tertiary freshwater strata of, by J. Prestwich, 1846, 56.
Italian peninsula, on the oaks to be found in the, by Capt. Widdrington, 1847, 89.
Italy, on certain volcanic rocks in, which appear to have been subjected to metamorphic action, by Dr. Daubeny, 1859, 102.
——, on a thermometer discovered in, by C. Babbage, 1836, 77.

Jamaica, on the condition of the labouring population of, as connected with the present state of landed property therein, by Prof. R. H. Walsh, 1855, 197.
Japan, notes on, by L. Oliphant, 1859, 194.
——, on some volcanic islets to the south-east of, including the Bonin Islands, by A. G. Findlay, 1856, 110.
Java to Timor, on some tertiary rocks in the islands stretching from, by J. B. Jukes, 1846, 67.
——, vital statistics of a district in, by J. Crawfurd, with remarks upon the Dutch possessions in the East, by Col. Sykes, 1848, 112.
Jersey, notice of the flora of, 1837, 103.
——, on the geology of, by R. A. C. Godwin-Austen, 1849, 49.
——, meteorological observations at, by Capt. Childers, 1846, 13.
——, on the difference in temperature between, and the Horticultural Gardens at Chiswick, by Capt. Childers, 1846, 13.
——, Torquay, Hastings, and London, temperature table, showing the daily average height of the thermometer at, 1848, 16.
Jerusalem, on levels taken in, with the aneroid barometer, by Capt. W. Allen, 1854, 116.

Kaffraria, British, journey across the rivers of, by Rev. F. Fleming, 1855, 47.
Kamtschatka, diurnal inequality in the tides on the coast of, 1839, 11.
Kent's Cavern, on relics of human art found in, by E. Vivian, 1847, 73.
Kerry, on the cleavage of the Devonians of the county of, 1855, 82; Silurians of, 83.
——, on the geological structure of the Dingle Promontory, in the county of, by J. B. Jukes, 1857, 70.
——, county of, on the remains of early stone-built fortresses and habitations in, by G. V. Du Noyer, 1857, 148.
Kertch, on the site of the ancient Greek city of Panticapæum near, by Dr. D. Macpherson, 1856, 115.
Kettleness Cliff, Yorkshire, notice of the discovery of a large Plesiosaurus in the, 1844, 49.
Kew observatory, on the meteorological observations at, with account of the photographic self-registering apparatus, by F. Ronalds, 1846, 10; 1847, 30.
—— observatory, on the graduation of standard thermometers at the, by J. Welsh, 1853, 34.
——, Royal Botanic Garden at, on the coloured glass of the Palm House in the, by R. Hunt, 1847, 51.
Kilmurry, statistics of the parish of, 1843, 93.
Kimweri or Usambara, Eastern Africa, on the resources of the kingdom of, by J. L. M'Leod, 1859, 193.
Kincardineshire, on the section of the coast between the Girdleness and Dunnottar Castle, by Rev. Dr. Longmuir, 1859, 261.
King George or Manakusi River, Eastern Africa, J. L. M'Leod on the, 1859, 189.
Kingston-upon-Hull, account of the circulating libraries in, 1839, 120.
——, on the state of education in the borough of, 1840, 177.
Kirkcudbrightshire, on the occurrence of graphite at Almorness Head, by Prof. Harkness, 1852, 50.
Kisaludini (in Rabbai), letter from the Rev. J. Rebmann to the Rev. H. Venn, from, 1854, 123.
Kissingen, Bavaria, on a remarkable spring at, by Prof. Forbes, 1838, 28.
Kraw, Isthmus of, on the project of a canal across the, by Sir R. Schomburgk, 1858, 153.
Kumáon, in the Himalaya Mountains, on the geography of, 1851, 92.
——, on the inhabitants of, 1851, 94.
——, Himalayas of, journeys in the, by A. and R. Schlagintweit, 1855, 152.

Labrador, some remarks on, by Col. Shaffner, 1860, 178.
Lake district, some observations on the fishes of the, by Dr. J. Davy, 1858, 122.
——, observations on the, by Dr. J. Davy, 1858, 149.
—— of England, on the glacial phenomena of the, by J. Bryce, 1855, 80.
——, on the geology of the, in reference especially to the metamorphic and igneous rocks, by J. G. Marshall, 1858, 84.
—— Westmoreland, heights of several mountains in the, taken with the aneroid métallique, by H. Poole, 1856, 46.
Lake Superior, North America, Rev. Mr. Schoolcraft on, 1842, 42.
—— and Huron, on the age of the copper-bearing rocks of, by W. E. Logan, 1851, 59; on the fossils of the, by J. W. Salter, 63.
Lamu, Eastern Africa, on the trade of, by J. L. M'Leod, 1859, 192.
Lanarkshire, on the Lesmahago and Douglas coal-field in, by J. Bryce, 1850, 77.
Lancashire, on the great coal-field of, by E. W. Binney, 1842, 49.
——, South, on the geology of the coal district of, by J. Heywood, 1837, 77.
——, West, on the coal-measures of, by W. C. Williamson, 1837, 81.
——, on marine shells in the deposits around Preston, 1831–32, 82.
——, on the gradual subsidence of the surface of Chat Moss by drainage, 1850, 101.
——, North, on the hæmatite ores of, by Prof. Phillips, 1858, 106.
——, on certain traces of Roman colonization in, by Dr. Black, 1845, 80.
——, on the criminal statistics of, by Mr. Hopkins, 1842, 95.
——, South, on the increase of property in, since the Revolution, by H. Ashworth, 1842, 94.

Lead Hills, near Glasgow, on the species of lead-ore at, by Prof. T. Thomson, 1840, 64.
Leasowe, on the submarine forest of, by J. Cunningham, 1854, 81.
Leeds, on the alkaline waters of, by W. Huggon, 1858, 51.
——, on the waters supplied to, by W. West, 1844, 106.
——, on the remains of the Hippopotamus found in the Aire Valley deposit near, by H. Denny, 1853, 51.
——, on the superficial deposits of the valley of the Aire at, by T. P. Teale, 1858, 111.
—— exhibition of local industry, list of some of the articles shown at the, 1858, 208.
——, on a few facts connected with the manufacture of pig-iron in the neighbourhood of, by W. J. Armitage, 1858, 204.
——, on the iron trade of, by J. Kitson, jun., 1858, 183.
——, history of flax-spinning in, by J. G. Marshall, 1858, 184.
——, on the woollen manufacture of, by E. Baines, 1858, 158.
——, on the sanitary and industrial economy of the borough of, by R. Baker, 1858, 164.
——, on the roof of the new Town Hall at, by C. Brodrick, 1858, 207.
Leicester, on the discovery of beds of Keuper sandstone containing zoophytes in the vicinity of, by J. Plant, 1849, 64.
Lena, in North Asia, on the valley of the, by Prof. A. Erman, 1842, 46.
Lewis, island of, on a diatomaceous deposit found in the, 1859, 133.
Limerick, co. of, on carboniferous limestone fossils from the, by W. H. Baily, 1857, 62.
——, on a new fossil fern from the coal-measures of, by W. H. Baily, 1857, 63.
——, on the igneous rocks interstratified with the carboniferous limestones of the basin of, by J. B. Jukes, 1860, 84.
Lincolnshire, on the dialects of, by C. Beckett, 1853, 73.
——, on the fens and submarine forests of, by Rev. E. Trollope, 1858, 113.
Linyanti, town of Sekeletu, extracts from a letter from Rev. Dr. Livingstone, 1854, 121.
Liverpool, on the fauna of, by I. Byerly, 1854, 107.
——, on the footsteps of extinct animals observed in a quarry in Rathbone Street, by J. Yates, 1840, 99.
——, on some rare and interesting mammalia and new land shells in the Royal Institution of, by Dr. J. E. Gray, 1837, 99, 100.
——, experiments on the intensity of terrestrial magnetism at, by Dr. Traill, 1831–32, 559.
Liverpool, on the deviation of the magnetic needle peculiar to, by Sir John Ross, 1854, 12.
——, on the ethnology of the district of, and on the Hoylake antiquities, by Rev. Dr. Hume, 1854, 129.
——, on the ages of the population in, by J. T. Danson, 1857, 158.
——, on education in the borough of, 1836, 133.
——, on the education of the poor in, by Rev. Dr. Hume, 1853, 103.
——, on the state of crime in, by W. Walmsley, 1837, 139.
——, account of the inhabited courts and cellars in, 1837, 143.
——, on the fires at, by A. Booth, 1843, 39.
Livonia, Esthonia, Courland, and Gothland, on certain ethnological questions connected with the coasts of, by Dr. R. G. Latham, 1853, 86.
Llangollen, Vale of, on the upper Silurian formation in the, by J. E. Bowman, 1840, 100.
Llanrwst, Denbighshire, on periodical birds observed near, by J. Blackwall, 1843, 69; 1844, 61; 1845, 63; 1847, 75.
Loanda, on the west coast of Africa, arrival of Dr. Livingstone at, 1854, 119.
Lobos Islands, on the, by Dr. M. Hamilton, 1852, 75.
Loch Fyne, on the crustacea of, by Prof. T. Bell, 1846, 81.
London, on the solar variation, through the seasons, of the barometer in the climate of, by L. Howard, 1844, 14.
——, on the drainage of, by E. Jones, 1858, 213.
——, on the fluctuations in the number of births, deaths, and marriages, and in the number of deaths from special causes in, by Dr. W. A. Guy, 1855, 167.
——, on the number, &c. of fires (1833 to 1837) in, by W. R. Rawson, 1838, 170.
——, public charities in, historical account of the ancient system of, by J. Fletcher, 1845, 88.
——, Dublin, and Glasgow, on the state of crime in, by Capt. Millar, 1840, 173.
—— and Edinburgh, on the difference of longitude between, by Sir T. M. Brisbane, 1838, 20.
—— and Geneva, annual mean temperature for eighteen years at, by L. Howard, 1845, 25, 26.
——, Jersey, Hastings, and Torquay, temperature table showing the daily average height of the thermometer at, 1848, 16.
Longmynd, Shropshire, on some fossils from the Cambrian rocks of the, by J. W. Salter, 1855, 95.
Lough Neagh, zoology of, compared with that of the Lake of Geneva, 1846, 84.
Louisenberg, the mountain, on the natural peculiarities of, 1846, 91.
Ludlow, on a phyllopod crustacean in the

upper Ludlow rock of, by Rev. W. S. Symonds, 1855, 98.
Lundy Island, on the granite and other volcanic rocks of, by Rev. D. Williams, 1834, 57; on the geology of, 1848, 79.
Lycia, notice of Lieut. Spratt's map of, 1843, 64.
Lyme Regis, on a remarkable deposit of carbonate of lime about fossils in the lower lias at, by G. Gladstone, 1858, 51.
Lymm, on the fossil footsteps in the new red sandstone quarry at, by Mr. Hawkshaw, 1842, 56.

Macassar and Timor, on the natives of, by Mrs. Short, 1846, 115.
Madagascar, island of, remarks on the, by J. L. M'Leod, 1859, 193.
Madeira, on the tenure of land in the island of, and observations on, by Rev. Dr. Peacock, 1849, 96.
Madras, barometrical levelings in, by Gen. Cullen, with observations by Col. Sykes, 1847, 42.
Mahra, Africa, on the geology of, 1846, 69.
Malacca, on guano from, by Dr. Cantor, 1845, 39.
Malton, Old and New, on the statistics of, by W. C. Copperthwaite, 1844, 89.
Malvern, Great, meteorological observations at, 1839, 14.
Manchester, experiments on the intensity of terrestrial magnetism at, 1831–32, 559.
——, on the limestones and strata in the vicinity of, by Prof. Phillips, 1836, 86.
——, statistics of, 1834, 690.
——, vital statistics of, 1842, 87.
——, on the vital statistics of the spinners and piecers employed in the fine cotton mills of, by Mr. Shuttleworth, 1842, 93.
——, on the ages of the population in, by J. T. Danson, 1857, 158.
——, on the income and expenditure of the working-classes in, by W. Neild, 1841, 90.
——, report on the state of education in, 1835, 119.
——, on the religious instruction of the working-classes in, 1835, 123.
——, on the industrial and training school near, by Mr. Gardner, 1842, 96.
——, on the registers of the collegiate church of, by Rev. R. Parkinson, 1842, 92.
——, on the police statistics of, by W. Neild, 1845, 89.
——, on the criminal statistics of, by Sir C. Shaw, 1842, 92.
Market Weighton, notice of a remarkable deposit near, containing bones of extinct animals, &c., 1831–32, 57.
Mayence, on the increase of elevation of the bed of the Rhine at, by Dr. L. Becker, 1850, 72.
Mayo, on the distribution of erratic blocks in, by Sir R. Griffith, 1843, 40.
——, on the occurrence of a bed of sand on a granite hill on the coast of, by Sir R. Griffith, 1843, 50.
Mayo and Sligo, on the trap dykes in, by Archdeacon Verschoyle, 1835, 59.
Memphis, on the site of the ancient city of, by the Marquis Spineto, 1836, 96.
——, on the figures of birds observed on a tomb at, by J. Bonomi, 1846, 79.
Menai Straits, experiments on the tubular bridge proposed by Mr. Stephenson for crossing the, by W. Fairbairn, 1846, 107, 108.
——, &c., black slates of the, on the geological position of the, by Prof. Ramsay, 1850, 102.
Merionethshire, on the discovery of gold ores in, by A. Dean, 1844, 56.
Mersey, on the tidal capacity of the, by Capt. Denham, 1837, 85.
——, on the rapid changes which take place at the entrance of the, by J. B. Yates, 1839, 77.
——, on the titaniferous iron of the shore of the, by Dr. J. B. Edwards, 1855, 61.
—— and Dee, on the survey of the, by Capt. Denham, 1835, 64.
—— and Dee, on the nudibranchiate mollusca of the, by Dr. Collingwood, 1860, 113.
Merthyr Tydvil, on the statistics of, by Mr. Kenrick, 1845, 90.
Messina, on transparent fishes from, by Prof. Kölliker, 1855, 111.
Mexico, on some plants from, by Dr. Schiede, 1835, 77.
——, on a new glirine animal from, by Dr. J. E. Gray, 1841, 70.
——, notice of the government map of, by Lieut.-Col. Velasquez de Leon, 1838, 98.
—— and Peru, on the theory and practice of amalgamation of silver ores in, by J. C. Bowring, 1844, 28.
Mississippi, on the delta and alluvial deposits of the, by Sir C. Lyell, 1846, 117.
Mont Blanc, on an optical phenomenon observed at, by Prof. De la Rive, 1837, 10.
——, on an ascent of, by Prof. Tyndall, 1858, 39.
——, on the establishment of thermometric stations on, by Prof. Tyndall, 1859, 56.
Montopoli, on a skeleton of Mastodon angustidens found near, by Dr. Vallini, 1852, 62.
Montrose, on a bone-cave near, by W. Beattie, 1859, 99.
Morayshire, on the age of the reptilian sandstones of, by J. Moore, 1859, 115.
Morocco, on the tribes composing the population of, by E. Schlagintweit, 1860, 177.
Mount Batten, on specimens supposed to be from the slaty rocks of, by S. P. Pratt, 1841, 64.
Mount Etna, physico-geographical description of, by Baron von Waltershausen, 1845, 59.
Mount Sinai, peninsula of, and adjacent

countries, on the geography and geology of the, by J. Hogg, 1849, 52.
Mozambique, city of, Eastern Africa, on the trade of the, by J. L. M'Leod, 1859, 191.
Mull, Isle of, on a fossiliferous deposit underlying basalt in the, by the Duke of Argyll, 1850, 70.
——, Isle of, discovery of plumbago in the, 1850, 102.
——, Isle of, and the Giant's Causeway, on the lignites of the, by Prof. Harkness, 1856, 66.
Mull of Galloway on the west coast, to St. Abb's Head on the east coast of Scotland, on the chain of rocks between the, by Rev. Prof. Sedgwick, 1850, 103.
Mundesley, Norfolk, the cliff at, new facts in relation to, by J. Prestwich, 1860, 90.
Munich, on the magnetic observatory of, by Dr. Lamont, 1840, 26.

Nagasaki, port of, Japan, account of the, by L. Oliphant, 1859, 194.
Napo River, on the eastern territory of the Ecuador and the, by Rev. C. G. Nicolay, 1854, 123.
Navigators Islands, on the physical character, languages, and manners of the people of the, by Mr. Heath, 1843, 67.
Nehanni tribe of a Kloochian class of American Indians, A. K. Isbister on the, 1847, 121.
Netherlands, on the social statistics of, by W. R. Greg, 1835, 125.
Newabbey, Galloway, on the granite formations of, by Rev. J. M. Fisher, 1840, 95.
New Brunswick, notice on the geography of, 1840, 121.
——, on certain geological features of the River St. John, with an account of the falls upwards from the sea, by Dr. Robb, 1840, 115.
——, on an anomalous form of the plum of, by Dr. Robb, 1840, 148.
Newcastle-on-Tyne, on the educational statistics of, by Mr. Cargill, 1838, 165.
——, on the church- and chapel-room in All Saints' parish, by D. H. Wilson, 1838, 166.
——, on a return of prisoners in, by J. Stephens, 1838, 166.
——, on the water-works of, by J. Glynn, 1838, 164.
——, statistical notices of the blind asylum in, by Rev. J. M'Alister, 1838, 167.
Newcastle and North Shields Railway, on the timber viaducts of the, by B. Green, 1838, 150.
Newfoundland, on the supposed extinct inhabitants of, by Dr. King, 1844, 85.
——, on the aborigines of, by J. B. Jukes, 1846, 114.
——, on a vocabulary of the Bethuck Indians of, by Dr. Latham, 1846, 115.
——, return of the number of civil actions, and civil and criminal prosecutions and informations in the northern district of, during 29 years, by J. Stark, 1855, 191.
New Granada, ethnological and antiquarian researches in, by W. Bollaert, 1857, 121.
New Guinea, on the negro of, by J. Crawfurd, 1851, 87.
——, on the progress of discovery in the western half of, by G. W. Earl, 1853, 76.
New Holland, on the geographical distribution of the animals of, by Dr. J. E. Gray, 1841, 68.
——, on the organ of voice in the ostrich of, by Dr. Macartney, 1836, 97.
New South Wales, on the plants of the coalfields of, by Prof. F. M'Coy, 1847, 64.
New York and Greenwich, experiment to determine the difference of longitude between, by E. J. Dent, 1839, 27.
New Zealand, on the geology of, by Dr. Dieffenbach, 1845, 50.
——, survey of the southern part of the middle island of, by Capt. J. L. Stokes, 1851, 97.
——, notice of paper made from the flax of, 1836, 132.
——, on a new method of scutching the flax of, by M. Whytlaw, 1852, 132.
Nice, Maritime, on the meteorology of, by Col. Sykes, 1854, 345; statistics of, 145.
Niger, on the expedition to ascend the, by Lieut. L. Macleod, 1852, 112.
Nile, on the climate of the valley of the, by T. S. Wells, 1850, 45.
——, on the sources of the, by F. Werne, 1848, 78.
——, summary of Nilotic discovery, by Dr. Beke, 1851, 84.
Nineveh, on the decomposed glass found at, by Sir D. Brewster, 1860, 9.
Nith, Vale of the, on the origin of the breccias of the southern portion of the, by Prof. Harkness, 1858, 81.
Norbury and Linley, on the Pentamerus limestone and May Hill sandstone of, by Rev. Prof. Sedgwick, 1853, 58.
Norfolk, on vertebrated animals found in the tertiary beds of, by E. Charlesworth, 1836, 84.
——, on the state of the agricultural labourers in the county of, by Sir J. Boileau, 1845, 89.
Norfolk Island, on the physical character and geology of, by Capt. Maconochie, 1844, 57; on the statistics of the criminal population of, 93.
Normandy, on two species of shells of the genus Conus, in the lias or inferior oolite near Caen, by Sir C. Lyell, 1840, 110.
——, on ancient sea-cliffs and needles in the chalk of the valley of the Seine in, by Sir C. Lyell, 1840, 111.
North Berwick, on the manner in which trap or igneous rocks intrude into the sandstone and conglomerate near, by General Portlock, 1850, 101.

North Polar Sea, on the Fish River of the, by Dr. R. King, 1844, 58.
North Sea, on the rise and fall of tide in the, by Capt. Hewett, 1841, 32.
Northumberland, on some basaltic formations in, by W. S. Gibson, 1859, 108.
—— and Cumberland, on the whin-sill of, by W. Hutton, 1831–32, 76.
—— and Cumberland, on the Tynedale coal-field and the whin-sill of, by J. A. Knipe, 1860, 86.
——, on the state of agriculture and condition of the labourers in, by J. Hindmarsh, 1838, 167.
——, statistics of the parishes of Bellingham and Ramsbottom, by W. H. Charlton, 1838, 168.
Northwich, on the extent of the salt-field of, by G. W. Ormerod, 1846, 62.
Norway, meteorological observations made at Christiania in, 1845, 19; 1846, 12; 1847, 33; 1849, 18; 1850, 36.
——, on certain phenomena connected with the junction of granitic and transition rocks near Christiania, by Sir C. Lyell, 1837, 67.
——, on the occurrence and chemical composition of some minerals from the south of, by D. Forbes, 1854, 67.
——, on the relations of the Silurian and metamorphic rocks of the south of, by D. Forbes, 1855, 82.
——, on the Brachiopoda observed in a dredging-tour on the coast of, by L. Barrett, 1855, 106.
——, on the composition of apatite from, by Prof. Voelcker, 1857, 59.
——, notice of a lithological map of, 1844, 55.
——, table of the Lapps and Finns in, according to the census-returns, by Dr. L. K. Daa, 1856, 139.
——, on the trade and navigation of, by R. Valpy, 1845, 87.
Norwich, on vertical lines of flint in the chalk near, by Sir C. Lyell, 1838, 87.
——, on the origin of sandpipes in the chalk near, by Sir C. Lyell, 1839, 65.
Noth, mountains of, Aberdeenshire, on the vitrified forts on the, by Sir A. L. Hay, 1859, 179.
Nottingham, on the land and freshwater mollusca found near, by E. J. Lowe, 1851, 80.
——, experiment on the growth of silk at, by W. Felkin, 1839, 87.
——, on the importance of an inquiry into the amount and appropriation of wages by the working-classes of, by W. Felkin, 1837, 148.
Novaïa Zemlïa, notice of Russian expeditions to, by Prof. von Baer, 1838, 96.
Nova Scotia, on the fossils of the coal-formation of, by Dr. J. W. Dawson, 1855, 81.
——, on the species of Meriones and Arvicolæ found in, by Dr. J. W. Dawson, 1855, 110.
Nova Scotia, on the occurrence of a land-shell and reptiles in the South Joggins coal-field, by Dr. J. W. Dawson, 1859, 102.
——, on the tides of, by Rev. Prof. Chevallier, 1856, 23.
——, on the meteorology of the Albion Mines, by Col. Sykes, 1854, 35.
——, statistics relative to, by E. Cheshire, 1853, 102.

Ohosaka, Japan, notice of the city of, by L. Oliphant, 1859, 195.
Oreston near Plymouth, on the ossiferous caverns at, by W. Pengelly, 1859, 121.
——, on the origin of the ossiferous caverns at, by H. C. Hodge, 1859, 110.
Orkney, on the climate of, by Rev. C. Clouston, 1859, 48.
—— and Shetland, zoological researches in, by Prof. E. Forbes and Prof. Goodsir, 1839, 79.
—— Islands, on the geology of the, by Dr. Traill, 1834, 644.
Orkneys, list of marine Polyzoa collected by G. Barlee in the, by G. Busk, 1859, 144.
Ortler Berg, on a remarkable movement of the Sulden Glacier under the side of the, by Sir T. D. Acland, 1847, 60.
Ottawa River, Canada, on the fossils from the, by J. W. Salter, 1851, 63.
Oude, India, on the people of, and their leading characteristics, by H. M. Greenhow, 1858, 151.
Oxford, notice of the new geological map of the vicinity of, by Sir R. I. Murchison, 1860, 90.
—— and Cambridge, on the comparative statistics of the universities of, in the 16th, 17th, and 19th centuries, by J. Heywood, 1842, 99.
——, on the revenues of the university and some of the colleges of, by J. Heywood, 1852, 118.
—— University, academic statistics of, by Rev. Prof. Powell, 1839, 119; 1843, 95.
Oxfordshire, on the invertebrate fauna of the lower oolites of, by J. F. Whiteaves, 1860, 104.

Pacific Ocean, explorations through the valley of the Atrato to the, in search of a route for a ship-canal, by F. M. Kelley, 1856, 162.
—— to the Atlantic, on a proposed railway from the, in the territories of British North America, by A. Doull, 1851, 111.
—— and Atlantic Oceans, on the communication between the, by G. Moro, 1844, 58.
—— and Atlantic Oceans, on the currents of the, by A. G. Findlay, 1853, 76.
—— and Indian Oceans, islands of the, on the three races of men inhabiting the, by J. B. Jukes, 1846, 114.
—— islands and the Indian Archipelago,

on the negro races of the, by J. Crawfurd, 1851, 86.
Palestine and shores of the Dead Sea, observations with the aneroid métallique during a tour through, 1856, 41.
Pantellaria, island of, on the geological structure of the, by the Duke of Buckingham, 1831–32, 592.
Panticapæum (Kertch), on the site of the ancient Greek city of, by Dr. D. Macpherson, 1856, 115.
Paraguay River, on the navigation of the, 1853, 73.
Parima, Lake, the El Dorado of Sir Walter Raleigh, Sir R. Schomburgk on the, 1845, 50.
Paris, on education in the Polytechnic School at, 1841, 96.
——, on the monts de piété of, by H. J. Porter, 1841, 91.
——, on the productive industry of, by G. R. Porter, 1852, 119.
Peebleshire, on a curious structure in the Silurian slates of, by A. Bryson, 1854, 78.
Pembrokeshire, on three undescribed bone-caves near Tenby, by Rev. G. N. Smith, 1860, 101.
Penine chain of mountains, Derbyshire, on the position of the rocks of the, by J. B. Jukes, 1838, 79.
Pennsylvania, on the geology of, by Prof. H. D. Rogers, 1848, 74.
——, on the bituminous coal-field of, by H. Phillips, 1837, 96.
Pentland Hills, on the geology of the, by C. Maclaren, 1834, 649.
Pen-y-bont and Builth, Radnorshire, on some points connected with the physical geology of the Silurian districts between, by Prof. A. C. Ramsay, 1848, 73.
Persia, on some insects from, by J. Wilson, 1840, 136.
Perth, on the meteorology of, by Dr. Anderson, 1840, 56.
Peru, ethnological and antiquarian researches in, by W. Bollaert, 1857, 121.
——, South, on the section of country from Iquique, province of Tarapaca, to Potosi, by W. Bollaert, 1852, 102.
——, on the position of the city of Cuzco in, by J. B. Pentland, 1838, 99.
——, on the theory and practice of amalgamation of silver ores in, by J. C. Bowring, 1844, 28.
Peterborough and Stamford, on the geology of the neighbourhood of, by Capt. Ibbetson and Prof. Morris, 1847, 127.
Peterhead, on zoophytes found in the vicinity of, by C. W. Peach, 1850, 126.
——, on some fishes, crustacea, and mollusca found at, by C. W. Peach, 1852, 78.
——, on the whale and seal fisheries of Greenland and Davis Straits, carried on by vessels from, 1859, 216.
Pilcomayo River, on the navigation of the, 1853, 73.
Plata River, on the navigation of the, by H. C. Dwerhagen, 1853, 73.
Plymouth, establishment of hourly observations of the thermometer in the Dockyard at, 1831–32, 579.
——, account of some indications of the anemometer at, by A. F. Osler, 1839, 17.
——, on the limestone hills of, by W. Walker, 1841, 66.
——, on the stratified and unstratified volcanic products near, by Rev. D. Williams, 1841, 61.
——, on the discovery of organic remains in the limestone cliff under the Hoe at, by Dr. E. Moore, 1841, 62.
——, on the strata penetrated in sinking an artesian well at the Victoria Spa, by Dr. E. Moore, 1841, 63.
——, Stonehouse, and Devonport, on the statistics of, by H. Woollcombe, 1841, 82; 1842, 98.
Plymouth Sound, on the geological changes produced by the Saxicava rugosa in, by W. Walker, 1841, 66.
Po in Piedmont and the basin of Switzerland, parallel between the superficial deposits of the valley of the, by Dr. C. Martins and B. Gastaldi, 1850, 90.
Point Barrow on the shores of the Polar Sea, on the amount and frequency of the magnetic disturbances and of the aurora at, by General Sabine, 1857, 14.
——, on the temperature of the air at, by Dr. J. Simpson, with remarks by Prof. Haughton, 1857, 37.
Polar Sea, on the popular notion of an open, by Rev. Dr. Scoresby, 1853, 92.
Polperro, Cornwall, on the fossils of, by C. W. Peach, 1843, 56.
Ponk Hill, Walsall, on the Rowley Rag at, by W. Matthews, 1858, 93.
Poole, Dorsetshire, on the plastic-clay formation of, by Rev. W. D. Clarke, 1837, 93.
—— Harbour, on two springs on the north side of Hales Bay, by Rev. W. D. Clarke, 1836, 94.
Port Essington, on a specimen of Machærium subducens from, by Sir J. Richardson, 1842, 69.
Port Natal, on Sertularian zoophytes and Polyzoa from, by G. Busk, 1850, 118.
Portsea, statistics of the island of, 1852, 118.
Portsmouth, on apparent changes in the level of the coast near, by General Portlock, 1848, 72.
Poulkova and Greenwich, difference of longitude between, 1847, 46.
Preston, on marine shells in the deposits about, by Sir R. I. Murchison, 1831–32, 82.
——, on marine shells of recent species at considerable elevations near, by W. Gilbertson, 1834, 654.
——, on the strike of the cotton-spinners of, by H. Ashworth, 1837, 140.
——, on the cause and consequences of the

strike in 1853 to 1854 in, by H. Ashworth, 1854, 130.
Prussia, on the statistics of, by Chevalier Bunsen, 1849, 86.
——, on the punishment of death in, by Mr. Fox, 1835, 124.
Punjaub, Upper, on Dr. A. Fleming's researches on the rocks of the, by Sir R. I. Murchison, 1852, 43.
Puzzuoli, on the subsidence of the land at, by J. Smith, 1845, 52.
Pyrenees, on the physical geography and hot springs of the, by Prof. J. D. Forbes, 1836, 83.

Quito, ethnological and antiquarian researches in, by W. Bollaert, 1857, 121.

Radnorshire, on the physical geology of the Silurian district between Builth and Penybont, by Prof. A. C. Ramsay, 1848, 73.
Ramsbottom, on the statistics of, by P. M'Dowall, 1838, 168.
Rathlin, island of, on the zoology of the, by J. D. Marshall, 1835, 68.
——, island of, and adjoining coast of Antrim, on some caves in the, by T. Andrews, 1834, 660.
Rhætian Alps, on the people of the, by Dr. Freund, 1854, 126.
Rhine, River, on the increase of elevation of the bed of the, by Dr. L. Becker, 1850, 72.
——, remarks as to the earlier existence of the Binnen or inland lake, by Dr. L. Becker, 1850, 73.
——, Middle, on the fossil contents of the tertiary and alluvial basin of the, by Sir R. I. Murchison, 1843, 55.
Robin Hood's Bay to Flamborough Head, on the evidence of a reef of lower lias rock extending from, by Capt. Woodall, 1856, 80.
Rocky Mountains, British North America, on the strata composing the, by Dr. Hector, 1860, 81.
——, on explorations in the, by Capt. J. Palliser, 1860, 170.
Rome, account of the monts de piété of, 1841, 91.
Ruad, island of, the ancient Aradus, Capt. W. Allen on the, 1852, 98.
Russia, on the stratified deposits which occupy the northern and central regions of, by Sir R. I. Murchison, 1840, 105.
——, on the geological structure of, by Sir R. I. Murchison, 1842, 45.
——, on the palæozoic rocks of, by Sir R. I. Murchison, 1844, 53.
—— in Europe, on Count Keyserling's Geology of the N.E. extremity of, by Sir R. I. Murchison, 1847, 65.
—— in Europe, on the non-Russian populations of, by Dr. Latham, 1854, 129, 139.
—— and Greenwich, on the importance of accurately connecting the observatories of, by Prof. Struve, 1847, 46.
Russo-Chinese frontier and the Amoor River, Dr. W. G. Blackie on the, 1858, 147.
Rutlandshire, on the educational condition of, 1839, 110.
——, on the state of the working-classes in, 1839, 112.

Sahara, central, of Algeria, on the geological system of the, by Rev. H. B. Tristram, 1860, 102.
Sana Island, on species obtained by deep dredging near, by G. C. Hyndman, 1842, 70.
Santorin, island of, notice of a map of the, 1841, 68.
Sardinia, on the language of, by J. Hogg, 1850, 140.
Saskatchewan territory, British North America, examination of the, by Capt. Palliser, 1860, 170.
——, on the climate of the, by Dr. Hector, 1860, 172.
Scandinavia, on the change of level of the land and sea in, by Sir C. Lyell, 1834, 652.
——, on the elevation of the coast of, by Major N. L. Beamish, 1843, 59.
——, on the palæozoic rocks of, by Sir R. I. Murchison, 1844, 53.
——, northern shores of, on the bathymetrical distribution of submarine life on the, by Prof. Lovén, 1844, 50.
——, on the disease called 'Radesyge,' of, by Dr. Hancock, 1837, 128.
Scarborough, analysis of the North and South wells at, 1844, 111.
——, on the vital statistics of, by J. Dunn, 1840, 167.
Schiehallion mountain, on the glacial phenomena of the, by R. Chambers, 1854, 79.
Scilly Isles, on the geology of the, by Rev. F. F. Statham, 1858, 109.
Scotland, on the geological structure and relations of the frontier chain of, by Rev. Prof. Sedgwick, 1850, 103; list of organic remains in, 107.
——, on the scratched and polished rocks of, by Sir R. I. Murchison, 1851, 66.
——, on the relations of the crystalline rocks of the North Highlands to the old red sandstone of that region, by Sir R. I. Murchison, 1855, 85.
——, the quartz rocks, crystalline limestone, and micaceous schists of the N.W. Highlands of, proved to be of lower Silurian age, by Sir R. I. Murchison, 1857, 82.
——, some results of researches among the older rocks of the Highlands of, by Sir R. I. Murchison, 1858, 94.
——, on the anthracite deposits and vegetable remains occurring in the lower Silurians of the south of, by Prof. Harkness, 1854, 86.
——, on the lowest sedimentary rocks of, by Prof. Harkness, 1855, 82.
——, on the origin of the breccias of the

southern portion of the valley of the Nith, by Prof. Harkness, 1858, 81.
Scotland, on the yellow sandstones of Elgin and Lossiemouth, by Prof. Harkness, 1859, 109.
——, on sections along the southern flanks of the Grampians, by Prof. Harkness, 1859, 109.
——, on the distribution of granite rocks from Ben Cruachan, by W. Hopkins, 1851, 59.
——, on striated rocks and other evidences of ice-action observed in the north of, by Prof. Nicol, 1855, 88.
——, on the age and relations of the gneiss rocks in the north of, by Prof. Nicol, 1858, 96.
——, on the relations of the gneiss, red sandstone, and quartzite in the North-west Highlands, by Prof. Nicol, 1859, 119.
——, on certain trap dykes in Arran, by Prof. Phillips, 1855, 94.
——, on the structure and mutual relationships of the older rocks of the Highland Border, by H. C. Sorby, 1855, 96.
——, on the great terrace of erosion in, by R. Chambers, 1854, 78.
——, on glacial phenomena in, by R. Chambers, 1854, 78.
——, on the subdivisions of the palæozoic rocks of, by D. Page, 1854, 91.
——, on the subdivisions of the palæozoic and metamorphic rocks of, by D. Page, 1855, 92.
——, on the palæontology of the tilest nes or Silurio-Devonian strata of, by D. Page, 1858, 104.
——, on the relations of the metamorphic and older palæozoic rocks in, by D. Page, 1858, 105.
——, on the chronology of the trap rocks of, by A. Geikie, 1859, 106.
——, on the geology of Castle Hill, Ardrossan, by W. Keir, 1840, 95.
——, on the submerged forests of Caithness, by J. Cleghorn, 1859, 101.
——, on the changes which have taken place in the levels of, by J. Smith, 1837, 87.
——, on the black-band ironstone of the coal-field of, by R. Bald, 1846, 62.
——, on the great mountain-range of the south of Scotland, by W. Macgillivray, 1834, 650.
——, on the foliation of some metamorphic rocks in, by Prof. E. Forbes, 1854, 82.
——, on a curious structure in the Silurian slates of Peebleshire, by A. Bryson, 1854, 78.
——, on the granite-formations of Newabbey in Galloway, by Rev. J. M. Fisher, 1840, 95.
——, on the drift-beds and boulders of the north of, by T. F. Jamieson, 1859, 114.
——, on the granite-quarries of Aberdeen and Kincardineshire, by A. Gibb, 1859, 235.
Scotland, on the section of the coast between the Girdleness and Dunnottar Castle, by Rev. Dr. Longmuir, 1859, 261.
——, on the remains of the cretaceous formation, &c., in Aberdeenshire, by Rev. Dr. Longmuir, 1859, 262.
—— on the sandstone of the Vale of Solway, and the formation of the Closeburn Basin, Nithsdale, by J. A. Knipe, 1840, 98.
——, on the superficial beds in the neighbourhood of Glasgow, by J. Smith, 1840, 94.
——, on a bone-cave near Montrose, by W. Beattie, 1859, 99.
——, on the fishes of the old red sandstone of the northern counties of, by Sir R. I. Murchison, 1840, 99.
——, on the structure of certain fossil fishes found in the old red sandstone of the north of, by Prof. M'Coy, 1852, 55.
——, on fossil fish new to the old red sandstone of Caithness, by C. W. Peach, 1859, 120.
——, on the newly discovered reptilian remains from the neighbourhood of Elgin, by Prof. Huxley, 1859, 261.
——, on the great Pterygotus and other species of, by J. W. Salter, 1856, 75.
——, on the fossils from Durness, by J. W. Salter, 1857, 83.
——, on the fossil remains of the lower Silurians of the south of, by Prof. Harkness, 1852, 48.
——, on new fossils from the lower old red sandstone of Kincardineshire and Forfarshire, by H. Mitchell, 1859, 116.
——, on fossil remains found at Urquhart, near Elgin, by Rev. J. Morrison, 1859, 263.
——, on the skeleton of a seal from the pleistocene clays of Stratheden, in Fifeshire, by D. Page, 1858, 103.
——, on the zoophytes of Caithness, by C. W. Peach, 1859, 155.
——, on the fossil floras of, by Hugh Miller, 1855, 83.
——, notice of the discovery of lead on the borders of Galloway and Ayrshire, by Lord Greenock, 1840, 97.
——, metalliferous veins of Tyndrum, 1840, 97.
——, notice of copper-veins in Argyleshire, and of marble from various places, 1840, 99.
——, on the occurrence of graphite at Almorness Head, by Prof. Harkness, 1852, 50.
——, on the rocks and minerals in the property of the Marquis of Breadalbane, by C. G. Thost, 1859, 125.
——, on the coal-fields of, by Lord Greenock, 1834, 639.
——, west of, on the coal-formation of the, by J. Craig, 1840, 89.
——, on the nature of the Torbanehill coal, by Prof. Redfern, 1854, 102.
——, on earthquakes in, by D. Milne, 1840, 97.

Scotland, on the rain-fall at Arbroath, by A. Brown, 1855, 30.
——, on the fall of rain in Forfarshire, by A. Brown, 1859, 47.
——, on the tides of the east coast of, by J. S. Russell, 1844, 6.
——, on the birds of the north of, by T. F. Jamieson, 1859, 150.
——, on the Coregoni of, by Sir W. Jardine, 1855, 111.
——, on the fauna of the Clyde, by Rev. Dr. C. P. Miles, 1855, 114.
——, on new forms of Diatomaceæ from the Firth of Clyde, by Prof. Gregory, 1856, 83.
——, on the alpine flora of, by Prof. Balfour, 1855, 100.
——, on the vitrified forts on the mountains of Noth and Dunnideer, by Sir A. L. Hay, 1859, 179.
——, on the sculptured stones of, by J. Stuart, 1859, 197.
——, on the progress of steamboat building in the Clyde, by Dr. Strang, 1852, 120.
——, on the advantages arising from the improvement of the navigation of the Clyde, by Dr. Strang, 1857, 168.
——, on the progress, extent, and value of the coal and iron trade of, by Dr. Strang, 1855, 193.
——, on the iron trade in, by Dr. A. Watt, 1845, 90.
——, on the evidence of the existence of primitive races prior to the Celtæ in, by D. Wilson, 1850, 142–146.
——, on the destitution and mortality of some of the great towns of, by Dr. Alison, 1842, 97.
——, on the reports of the Poor Law Commissioners on the state of the poor in, by Dr. Alison, 1844, 95.
——, on the medical relief to the parochial poor of, under the old poor law, by Dr. Alison, 1846, 97.
——, on the law of settlement and the removal of paupers in, by Dr. Alison, 1852, 114.
——, on the agricultural statistics of the county of Aberdeen, by A. Harvey, 1859, 210.
——, on illegitimacy in Aberdeen and the other large towns of, by J. Valentine, 1859, 224.
——, on the statistics, chiefly vital and economic, of Aberdeen, by J. Valentine, 1859, 226.
——, on the manufactures and trade of Aberdeen, by G. B. Bothwell, 1859, 200.
——, on church-building in Glasgow, by Dr. Strang, 1859, 223.
——, on the money-rate of wages of labour in Glasgow and the west of Scotland, by Dr. Strang, 1856, 155.
——, on the progress, extent, and value of the porcelain, earthenware, and glass manufacture of Glasgow, by Dr. Strang, 1856, 153.
Scotland, on the embroidered muslin manufacture of, by Dr. Strang, 1857, 167.
——, on the laws of the currency in, by J. W. Gilbart, 1855, 166.
——, notice of the "New Statistical Account of," by Mr. Gordon, 1834, 692.
Seleucia in Pieria, on the ancient harbour of, by Capt. W. Allen, 1852, 98.
Severn, on the hydrography of the, by Sir R. I. Murchison, 1836, 88.
——, on a fossil of the drift of the, by Rev. W. S. Symonds, 1857, 93.
——, list of marine shells from the banks of the, 1847, 62.
——, list of semimarine plants occurring in the vale of the, 1847, 62.
——, Usk, and Avon, on the mud deposited by the tidal waters of the, 1837, 76.
Sheffield, economic statistics of, 1841, 87; vital statistics of, 88.
Sheppey, on the remains of a gigantic bird from the London clay of, by J. S. Bowerbank, 1851, 55.
Shetland and Orkney, zoological researches in, by Prof. E. Forbes and Prof. Goodsir, 1839, 79.
——, list of marine Polyzoa collected by G. Barlee in, with descriptions of the new species, by G. Busk, 1859, 144.
Shiré River and valley, and inhabitants, in South-Central Africa, Dr. Livingstone on the, 1860, 164.
Shropshire, on the footprints and ripple-marks of the new red sandstone of Grinshill Hill, by Dr. Ward, 1839, 75.
——, on some fossils from the Cambrian rocks of the Longmynd, by J. W. Salter, 1855, 95.
Shyenne numerals, Dr. Latham on the, 1847, 123.
Siam, account of Sir John Bowring's mission to, by H. Parkes, 1855, 149.
Siberia, on the frozen soil of, by Prof. von Baer, 1838, 96.
——, on certain races of, by Prof. von Middendorff, 1846, 115.
——, on the manners and customs of the Yacoutes, by Prince Galitzin, 1853, 80.
Sicily, on two newly discovered ossiferous caves in, by Baron Anca, 1860, 73.
——, on the language of, by J. Hogg, 1850, 140.
Sidlesham, in Kent, on the educational statistics of, by Rev. F. De Soyres, 1837, 140.
Sierra Leone, remarks on, by Dr. W. B. Baikie, 1856, 107.
——, on the crania of two species of crocodile from, 1846, 79.
Silesia, on the origin of the coal of, by Dr. Göppert, 1846, 50.
Simla observatory, notice of, 1845, 4.
Sligo, on the distribution of erratic blocks in, by Sir R. Griffith, 1843, 40.
—— and Mayo, on the trap dykes in, by Archdeacon Verschoyle, 1835, 59.

Snowdon, on the rocks in the valleys around, and on the indications of the former existence of glaciers in these valleys, by Rev. Dr. Buckland, 1848, 78.
Sofala, Eastern Africa, the ancient Ophir of Solomon, J. L. M'Leod on, 1859, 189.
Solway, Vale of, on the sandstone of the, by J. A. Knipe, 1840, 98.
Somersetshire, notice of a specimen of Ichthyosaurus tenuirostris from the lias of, 1831–32, 587.
Southampton, on the climate of, by Dr. J. Drew, 1854, 29.
——, on the presence of atmospheric air, uncombined chlorine, and carbonic acid in the water of wells in the suburbs of, and their action on lead, by H. Osborn, 1846, 42.
Southampton Common, on the artesian well on, by J. R. Keele, 1846, 52.
——, on the applicability of M. Fauvelle's mode of boring artesian wells to the well at, by Rev. Dr. Buckland, 1846, 56.
South Sea, short notice relating to the inhabitants of the islands of the, 1845, 80.
Spain, on the arboreal vegetation of, by Capt. Widdrington, 1847, 88.
——, on the geology of, by Dr. Traill, 1835, 61; 1837, 70.
——, on the geological structure of, in explanation of an outline general map of the Peninsula by E. de Verneuil, by Sir R. I. Murchison, 1850, 108.
——, on the sugar-produce of the south of, by Dr. Scoffern, 1850, 60.
St. Abb's Head on the east coast, to the Mull of Galloway on the west coast of Scotland, on the chain of rocks between, by Rev. Prof. Sedgwick, 1850, 103.
St. Helena, on the molluscous fauna of, by Prof. E. Forbes, 1851, 76.
St. Helen's, Lancashire, on fossil trees at, which exhibit Stigmariæ as their roots, by E. W. Binney, 1845, 52.
St. Helier, Jersey, table of the difference in temperature between that place and the Horticultural Gardens, Chiswick, 1846, 13.
——, Jersey, meteorological observations made at, 1846, 13.
St. Ives, Huntingdonshire, on the geology of, by J. K. Watts, 1852, 63.
St. John River, New Brunswick, on certain geological features of the, with an account of the falls upwards from the sea, by Dr. Robb, 1840, 115.
St. Lucia Bay and the adjacent country in S.E. Africa, R. W. Plante on a second journey to, 1853, 90.
St. Lucia, Port, in Eastern Africa, J. L. M'Leod on, 1859, 188.
Staffordshire, on an economical use of the granitic sandstone of, by R. Garner, 1839, 77.
——, on the age of the Silurian limestone of Hay Head, near Barr Beacon, by Prof. Buckman, 1846, 61.
Staffordshire (North) coal-fields, on fossil fish from the, by W. Molyneux, 1860, 88.
—— (North), on the coal-strata of, with reference particularly to their organic remains, by R. Garner and W. Molyneux, 1859, 103.
—— (South) coal-field, on the relations between the new red sandstone, the coal-measures, and the Silurian rocks of the, by J. B. Jukes, 1849, 55.
Stamford and Peterborough, on the geology of the neighbourhood of, by Capt. Ibbetson and Prof. Morris, 1847, 127.
Stockholm, on the magnetic dip at, 1858, 27.
Stonesfield, Oxfordshire, on the thickness of the formations below the great oolite at, by E. Hull, 1860, 81.
Stonyhurst, results of ten years' meteorological observations at, by Rev. A. Weld, 1860, 56.
Storeton Hill, Liverpool, on the footsteps of the Cheirotherium, &c., in the stone-quarries of, 1838, 85.
Storvandofjeld, in Norway, some remarks on the mountain called, 1844, 27.
Stratheden, Fifeshire, on the skeleton of a seal from the pleistocene clays of, by D. Page, 1858, 103.
Stromness, notice of the natural printing of sea-weeds on the rocks in the vicinity of, 1856, 90.
Stroud Valley, Gloucester, notice of elephants' tusks found in the, 1854, 78.
Styria, on the mode of manufacturing steel in, by J. I. Hawkins, 1831–32, 608.
Suez, Isthmus of, on the proposed ship-canal through the, by Dr. Hodgkin, 1857, 199.
——, Gulf of, on the geology of the Sinaic coast of the, by J. Hogg, 1849, 52.
—— and Cairo, results of trials made for water in the desert between, 1837, 66.
Suffolk, on the rain-fall at Monk's Eleigh in, by Revs. T. Knox and H. Knox, 1848, 23.
——, on the remains of mammalia in the crag and London clay of, by Sir C. Lyell, 1839, 69.
——, on vertebrated animals found in the tertiary beds of, by E. Charlesworth, 1836, 84.
Sumeru Parbut Mountain, on the ascent of the, by Capt. Robinson, 1855, 150.
Surrey, on the greenstone strata of (firestone), by Prof. Johnston, 1853, 52.
Sussex, notice of the fossils of Bracklestone Bay, 1846, 67.
Sutherlandshire, on the coleopterous insects of, by J. Wilson, 1834, 615.
——, on birds observed in, by P. J. Selby, 1834, 610.
——, north-west of, on the Salmonidæ of the, by Sir W. Jardine, 1834, 613.
——, the quartz-rocks, crystalline limestones, and micaceous schists of, proved to be of lower Silurian age, by Sir R. I. Murchison, 1857, 82.

Swaffham Bulbeck, on the turf of the fens near, by Rev. L. Jenyns, 1845, 75.
Swale, on the artificial breeding of salmon in the, by J. Hogg, 1853, 68.
Swansea, meteorological phenomena observed at, by J. Jenkins, 1848, 23.
Sweden, Count Rosen on maps of, 1847, 67:—
Hypsographic map of, 67.
Map of the position and character of the forests of, 68.
Map representing its iron produce, 68.
Map representing the distribution of its population, 68.
Map of Sweden and Norway, showing the naval and military organisation of those two kingdoms, 68.
Map of the watercourses of, 69.
General map of Scandinavia, 69.
Lithological map of, notice of, 1844, 55.
——, on changes in the fauna of, by Prof. Nilsson, 1847, 79.
——, on the Bergmehl collected in the vicinity of Lake Lettnaggejön, by Prof. Ehrenberg, 1838, 116.
Switzerland, on the lacustrine homes of the ancient Swiss, by M. Troyon, 1858, 154.
——, basin of, and the valley of the Po in Piedmont, parallel between the superficial deposits of, by Dr. C. Martins and B. Gastaldi, 1850, 90.
——, on glaciers and boulders in, by Prof. Agassiz, 1840, 113.
Syria, on Gebel Haurân, its adjacent districts, and the eastern desert of, by J. Hogg, 1859, 180.
——, on the Wadi el 'Arabah in, by Rev. Dr. Robinson, 1840, 121.

Table Bay and Algoa Bay, South Africa, on Sertularian zoophytes and Polyzoa from, by G. Busk, 1850, 118.
Tacna, in Peru, on the earthquake which destroyed the city of, by Dr. M. Hamilton, 1840, 123.
Tarai, at the foot of the Himalayas, on the inhabitants of the, by J. B. Davis, 1859, 177.
Taunton and Bristol, on railway sections made on the line of the Great Western Railway between, by W. Sanders, 1846, 59.
Tawey River, on remains discovered beneath the bed of the, by C. Spence Bate, 1848, 62.
Tay, on the ossiferous beds in the basin of the, by Dr. Hibbert, 1834, 642.
Tchadda River, on the expedition up the, by Dr. Baikie, 1855, 146.
—— probably the outlet of the lake Tchad, by Capt. W. Allen, 1838, 99.
Templemore, on the statistics contained in the Ordnance Survey of the parish of, by C. Babbage, 1835, 118.
Temby, on three undescribed bone-caves near, by Rev. G. N. Smith, 1860, 101.
Tewkesbury, discovery of an Ichthyosaurus in the lias limestone at Strensham near, 1839, 70.
Texas, on the Comanche Indians, and Indian tribes of, by W. Bollaert, 1846, 116.
Thames, from Lechlade to Windsor, on the course of the, as ruled by the geological formations over which it passes, by Rev. J. C. Clutterbuck, 1860, 75.
——, on the composition of the water of the, by Dr. W. Odling and Dr. Dupré, 1859, 75.
Thibet, on some of the animals of, by H. and R. Schlagintweit, 1857, 106.
——, Western, on the botanical geography of, by Dr. T. Thomson, 1851, 73.
—— and the Himalaya, on the geology of part of, by Capt. Strachey, 1851, 69; on the botanical geography of, by Major Madden and Capt. Strachey, 72.
Thirlmere Valley, on glacial action in the, by R. Chambers, 1854, 79.
Timbuctoo, its population and commerce, description of, by Dr. Barth, 1855, 140.
Timor to Java, on some tertiary rocks in the islands stretching from, by J. B. Jukes, 1846, 67.
—— and Macassar, on the natives of, by Mrs. Short, 1846, 115.
Tipperary, on the tertiary clay and lignite of Ballymacadam near Caher, in the county of, by A. B. Wynne, 1857, 94.
Toomavara, co. Tipperary, on the rain-fall in, 1843, 23.
Torbanehill, on the nature of the coal of, by Prof. Redfern, 1854, 102.
Torbay, on the Beekites found in the red conglomerates of, by W. Pengelly, 1856, 74.
Torquay, Kent's Cavern, researches in, with extract from the original MS. memoir of its opening, by E. Vivian, 1856, 78, 119.
——, Jersey, Hastings, and London, temperature table showing the daily average height of the thermometer at, 1848, 16.
—— and South Devon, on the climate of, by E. Vivian, 1856, 48.
Tralee, on the geology of the neighbourhood of, by F. J. Foot, 1857, 65.
Travancore, on the magnetic, meteorological, and astronomical observatory on the mountain of Angusta Mullay, at 6200 feet, in, by J. A. Broun, 1855, 25; 1858, 30.
——, observatory of, on results of observations in the, by J. A. Broun, 1860, 20.
——, on the fall of rain on the table-land of Uttree Mullay and coast of, by Col. Sykes, 1846, 22; 1848, 39.
Trevandrum, on the temperature of the earth at, by Prof. J. D. Forbes, 1847, 40.
——, results of magnetical observations at, by J. A. Broun, 1858, 30.
——, on meteorological observations made at, by Mr. Caldecott, 1840, 28.
Truro and Falmouth, on an original broad sheet of granite between, by Rev. D. Williams, 1849, 68.
Tshidda or Tshádda River, notice of the ex-

pedition to ascend the, by Dr. W. B. Baikie, 1856, 106.
Tuscany, on palæontological discovery in, by Prof. Meneghini, 1857, 79.
——, on the infant industrial schools of, by E. Mayer, 1843, 93.
Tweed, on the red sandstone of the, by N. Wood, 1838, 78.
Tyndrum, notice respecting the metalliferous veins of, 1840, 97.
Tynedale, on the coal-field of, by J. A. Knipe, 1860, 86.
Tyrol, on the disintegration of the dolomitic rocks of the, by Dr. Daubeny, 1841, 48.
Tyrone, on the Silurian rocks in the county of, by General Portlock, 1838, 84.

United States, on the meteorology of the, by R. Russell, 1855, 42.
——, on the progress of natural science in the, by P. P. Carpenter, 1860, 109.
——, on the tendency of European races to become extinct in the, by E. Clibborn, 1856, 136.
——, on the connexion between slavery in the, and the cotton manufacture in the United Kingdom, by J. T. Danson, 1856, 137.
——, on the trade between Great Britain and the, by G. R. Porter, 1837, 136.
——, on certain electrical phenomena in the, by Prof. Loomis, 1857, 32.
——, on canals and railways in the, by Prof. Henry, 1837, 135.
Ural Mountains, on the geology of the, by Sir R. I. Murchison, 1842, 45.
——, on the gold regions of the, by Sir R. I. Murchison, 1849, 60.
Utrecht and Greenwich, on the similarity of the lunar curves of minimum temperature at, by J. P. Harrison, 1860, 44.

Vancouver's Island, on the geology of, by Dr. Hector, 1860, 81.
——, observations on, by K. L. Sutherland, 1857, 153.
Van Diemen's Land, on the plants of the coal-fields of, by Prof. F. M'Coy, 1847, 64.
——, on three new genera of marine fishes from, by Sir J. Richardson, 1841, 71.
——, on the great dog-headed opossum of, by Prof. Owen, 1841, 70.
——, on some water-colour portraits of natives of, by R. Cull, 1855, 142.
Vermejo River, on the navigation of the, 1853, 73.
Victoria, on the trade and progress of the colony of, by Hon. T. M'Combie, 1859, 218.
Vienna, on the mineralogical and geological museum of the Imperial Mining Department of, by Prof. Haidinger, 1842, 39.
——, on the steel suspension-bridge over an arm of the Danube at, 1831–32, 608.
Virginia, sketch of the structure of, with reference to the faults in the Alleghanies, by Prof. W. B. Rogers, 1849, 65.
Virginia, West, on coal-deposits in, by Prof. Buckman, 1854, 78.

Wadi el 'Arabah, in Syria, notes on the, 1840, 121.
Wales, North, on the thickness of the ice of the ancient glaciers of, by Prof. A. C. Ramsay, 1854, 94.
——, North, on the lowest fossiliferous beds of, by J. W. Salter, 1852, 56.
——, North, on the discovery of gold-ores in Merionethshire, by A. Dean, 1844, 56.
——, North, on the stratification of igneous and sedimentary rocks of the Lower Silurian formation in, by A. Dean, 1844, 56.
——, North, on the rocks in the valleys around Snowdon, and on the various indications of the former existence of glaciers in these valleys, by Rev. Dr. Buckland, 1848, 78.
——, North, on the yew-trees in the churchyard of Gresford, by J. E. Bowman, 1836, 101.
——, South, on the chemical composition of some iron ores called "brass" occurring in the coal-measures of, by E. C. Nicholson and Dr. D. S. Price, 1855, 66.
——, South, on the marine shell-bed of the upper coal-measures of, and on shells and fish in the lower coal-measures of, by G. P. Bevan, 1858, 80.
——, South, on the relative position of the various qualities of coal in the coal-measures of, by S. Benson, 1848, 65.
——, South, W. P. Struvé on the great anticlinal line of the mineral basin of, 1848, 75; on the coal-field of, 75.
——, South, on the old red sandstone of, by J. B. Jukes, 1857, 73.
Walsall, on the Rowley Rag at Ponk Hill, by W. Matthews, 1858, 93.
Warwick, county of, asylum for juvenile offenders, C. H. Bracebridge on the, 1849, 87.
Warwickshire, on the geology of, by Dr. G. Lloyd, 1839, 73.
——, on a new species of Labyrinthodon from the new red sandstone of, by Dr. G. Lloyd, 1849, 56.
——, on a singular fault in the southern termination of the coal-field of, by C. Twamley, 1853, 62.
Washington, Smithsonian Institution at, on the principles and working of the, by P. P. Carpenter, 1860, 109.
Waterford, on certain alterations of level on the sea-coast of part of the county of, by Dr. Clarke, 1857, 65.
West Indies, are there any impediments to the competition of free labour with slave labour in the?, by Prof. Hancock, 1852, 117.
Westmoreland, levellings by the aneroid

métallique in the Lake district of, by H. Poole, 1856, 46.
Westmoreland, description of a section across the Silurian rocks in, by J. G. Marshall, 1839, 67.
——, on striated and polished rocks and "roches moutonnées" in the Lake district of, by J. Bryce, 1850, 76, 112.
——, on the fall of rain in the Lake districts of, by J. F. Miller, 1846, 18.
Westphalia, on the carboniferous and Devonian systems of, by Sir R. I. Murchison, 1839, 72.
Wexford, on iron pyrites connected with fossil graptolites from Tinnaglough, in the county of, by A. Gages, 1860, 79.
——, on fossil stems allied to Stigmaria from the upper beds of the old red sandstone of Hook Point in the county of, by Rev. Prof. Haughton, 1857, 69.
——, notice of a MS. History of (written in 1684), 1840, 149.
Weymouth Bay, results of a day's dredging in, by W. Thompson, 1857, 108.
Wherstead, near Ipswich, on a stratum of stones covered with barnacles in the red crag at, by Sir C. Lyell, 1851, 65.
Whitby, discovery of a large Plesiosaurus in the lias near, 1848, 78.
Whitehaven, on the petroleum of, by Prof. Johnston, 1838, 60.
Wick, on the herring-fishery averages of the district of, 1854, 176.
Wicklow, on the geology of the county of, by Prof. Oldham, 1848, 71.
——, on the alteration of clay-slate and gritstone into mica-schist and gneiss by the granite of, by J. B. Jukes, 1856, 68.
——, notice of the one-inch map of the northern part of the county of, 1854, 87.
Wigan, on the dislocations of the coal-strata of, by W. Peace, 1837, 82.
Windermere Lake, on a singular iridescent phenomenon seen on, by J. C. Mounsey, 1855, 41.
Wirral, statistics of poor relief and movement of population in the commercial district in the Hundred of, by Mr. M'Nerney, 1854, 142.
Wirral Peninsula, and the growth of its population, by J. T. Danson, 1856, 143.
Wolverhampton, on reptilian footprints in the new red sandstone north of, by Rev. W. Lister, 1860, 87.
——, on an artesian well in the new red sandstone at the waterworks of, by J. F. Bateman, 1859, 229.
Woodspring Hill, near Bristol, on a raised sea-beach at, by W. Sanders, 1840, 102.
Worcester, on marine shells found in gravel near, by J. Allies, 1839, 70.
Worcestershire, on fossil vegetables from the new red sandstone of, by J. Yates, 1837, 59.
——, on the occurrence of marine plants in, by Prof. Buckman, 1847, 61.
——, on the vegetable remains in the Keuper sandstone of Longdon, by Prof. Strickland, 1849, 66.
Workington collieries, on an incursion of the sea into the, by Rev. Prof. Sedgwick, 1837, 75.

Yang-tse-kiang River, and the Hwang-ho, or Yellow River, of China, W. Lockhart on the, 1858, 152.
——, China, on the, and its future commerce, by Capt. S. Osborn, 1859, 196.
Yealm Bridge Cavern, notice of some mammals found in, 1841, 68.
Yedo, city of, Japan, account of the, by L. Oliphant, 1859, 195.
Ynyscedwin Ironworks, on the smelting of iron with anthracite coal at the, by G. Crane, 1837, 52.
York, on the quantities of rain falling at different elevations at, by Prof. Phillips, 1833, 401.
——, researches on rain at, by Prof. Phillips, 1841, 30.
——, on the quantities of rain received in gauges at unequal elevations upon the ground at, by Prof. Phillips, 1844, 21.
——, on the curves of annual temperature at, by Prof. Phillips, 1844, 21.
—— (Minster), on the temperature of the air in, by Prof. Phillips, 1841, 29.
——, on the state of education in, 1837, 144.
——, on the sanitary condition (1839–1843) of, by Dr. Laycock, 1844, 90.
Yorkshire, on the birds of, by T. Allis, 1844, 60.
——, on the fishes of, by T. Meynell, 1844, 62.
——, on the flora of, by O. A. Moore, 1844, 70.
——, on plants and animals found in the sulphureous waters of, by Dr. Lankester, 1840, 143.
——, on the mineral springs and other waters of, by W. West, 1844, 28, 105.
——, on the temperature of the air at various soundings of Huggate Well, by Rev. T. Rankin, 1844, 22.
——, on the direction of isoclinal magnetic lines in, by Prof. Phillips, 1836, 31; 1850, 14.
——, on magnetic phenomena in, by Prof. Phillips, 1853, 6.
——, account of the Grassington lead-mines near Skipton, by S. Eddy, 1844, 52.
——, on the mineral produce of, by R. Hunt, 1858, 181.
——, on the discovery of a large Plesiosaurus at Kettleness cliff, 1844, 49.
——, on the flagstones of, and their fossils, by W. Baines, 1858, 78.
——, on the restoration of Zamites gigas from the lower sandstone and shale of the coast of, by Prof. W. C. Williamson, 1854, 103.
——, South, on the currents present during the deposition of the carboniferous and

Permian strata of, by H. C. Sorby, 1858, 108.
Yorkshire, on a newly discovered tertiary deposit in, by Prof. Phillips, 1835, 62.
——, on the dispersion of erratic rocks at higher levels than their parent rock in, by Prof. Phillips, 1853, 54.
——, on the limestones of, by W. Lucas, 1844, 30.
——, account of the most remarkable phenomena in the geology of, by Prof. Phillips, 1831–32, 56.
——, on the comparative geology of Hotham, near South Cave, by Rev. T. W. Norwood, 1858, 96.
——, on the geological distribution of plants in some districts of, by Dr. Carrington, 1858, 115.
——, on the dialects of, by C. Beckett, 1853, 73.
——, on tumuli in, by Prof. Phillips, 1849, 86.
——, on the opening of a sepulchral tumulus in, by T. Wright, 1858, 156.
Yorkshire, on the woollen manufacture of, by E. Baines, 1858, 158.
——, on the worsted manufacture of, by J. James, 1858, 182.
——, on the registry of deeds in the West Riding of, by J. E. Dibb, 1858, 175.

Zambesi River, Eastern Africa, on the resources of the, by J. L. M'Leod, 1859, 190, 192.
Zanzibar, on the climate of, by Col. Sykes, 1852, 113.
——, Eastern Africa, on the resources of, by J. L. M'Leod, 1859, 192.
Zetland and Hebrides, notice of dredging-researches in the seas of, by Prof. E. Forbes, 1847, 77.
——, notice of the crustacea of the coast of, by Prof. T. Bell, 1846, 80.
——, notice of some rare mollusca collected in, 1849, 78.
Zeylah or Zeïla, in Eastern Africa, notice of, by J. L. M'Leod, 1859, 193.

THE END.

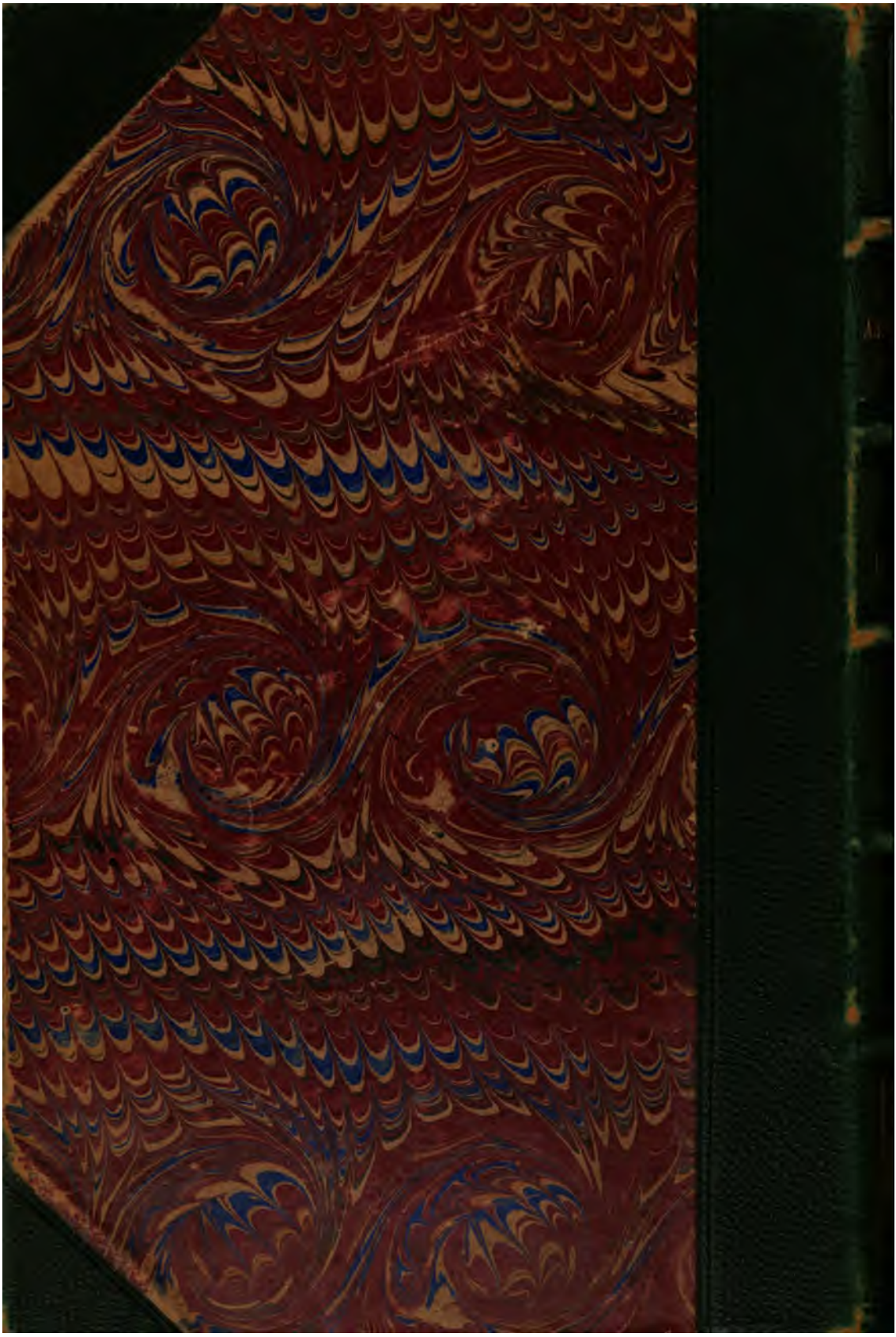
TAYLOR AND FRANCIS, PRINTERS, RED LION COURT, FLEET STREET.

THIS BOOK IS DUE ON THE LAST DATE STAMPED BELOW

AN INITIAL FINE OF 25 CENTS

WILL BE ASSESSED FOR FAILURE TO RETURN THIS BOOK ON THE DATE DUE. THE PENALTY WILL INCREASE TO 50 CENTS ON THE FOURTH DAY AND TO $1.00 ON THE SEVENTH DAY OVERDUE.

AUG 31 1939

NON-CIRCULATING BOOK

U. C. BERKELEY LIBRARIES
C041217290